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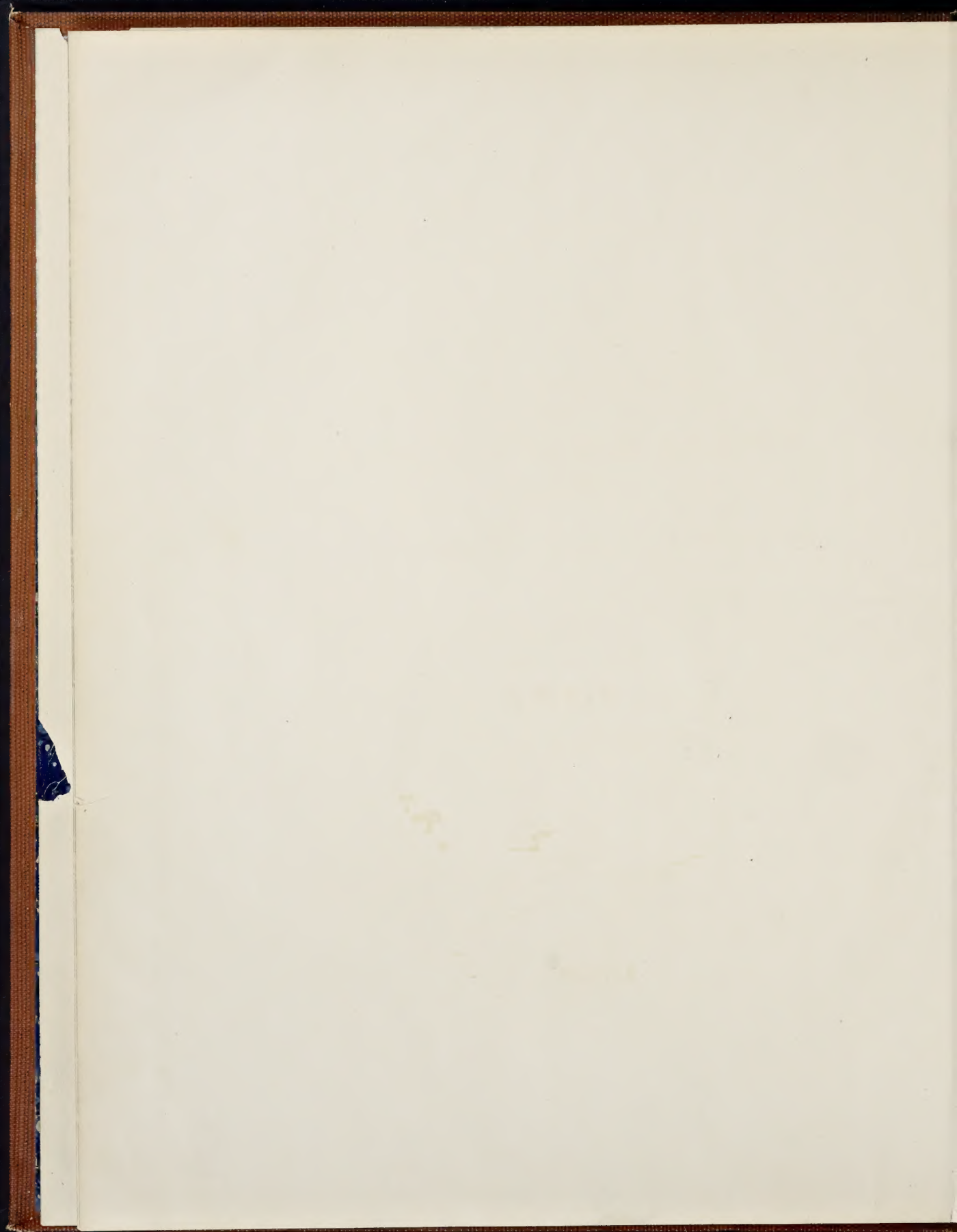














MEMOIRS  
OF THE  
PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND  
ETHNOLOGY, HARVARD UNIVERSITY

VOL. V—No. 3

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A PRELIMINARY STUDY  
OF  
THE PREHISTORIC RUINS OF NAKUM  
GUATEMALA

A REPORT OF THE PEABODY MUSEUM EXPEDITION  
1909-1910

BY  
ALFRED M. TOZZER

219049

WITH FIFTY-FOUR ILLUSTRATIONS IN THE TEXT  
AND TWENTY-THREE PLATES

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#### EDITORIAL NOTE

IN accordance with the plan of the Peabody Museum Expeditions to Central America, Dr. Tozzer has in the present Memoir made the second report on the expedition under his charge during the season of 1909-10.

It has been the object of the Museum Expeditions, since their inception in 1888, to explore the whole Maya area of Mexico, Guatemala, Honduras and British Honduras in search of monuments and buildings bearing sculptures and hieroglyphic inscriptions with the hope of securing photographs and moulds before they are destroyed by natural disintegration, by fires when the natives clear the land for cultivation, and by pure vandalism. An instance of the latter occurred as recently as January, 1912, when two of the sculptured stelae of the prehistoric city of Copan were broken into small pieces for the purpose of making a foundation for an adobe wall about the cemetery of the modern village of Copan. Fortunately these stelae had been photographed and one of them had been moulded by a Peabody Museum Expedition.

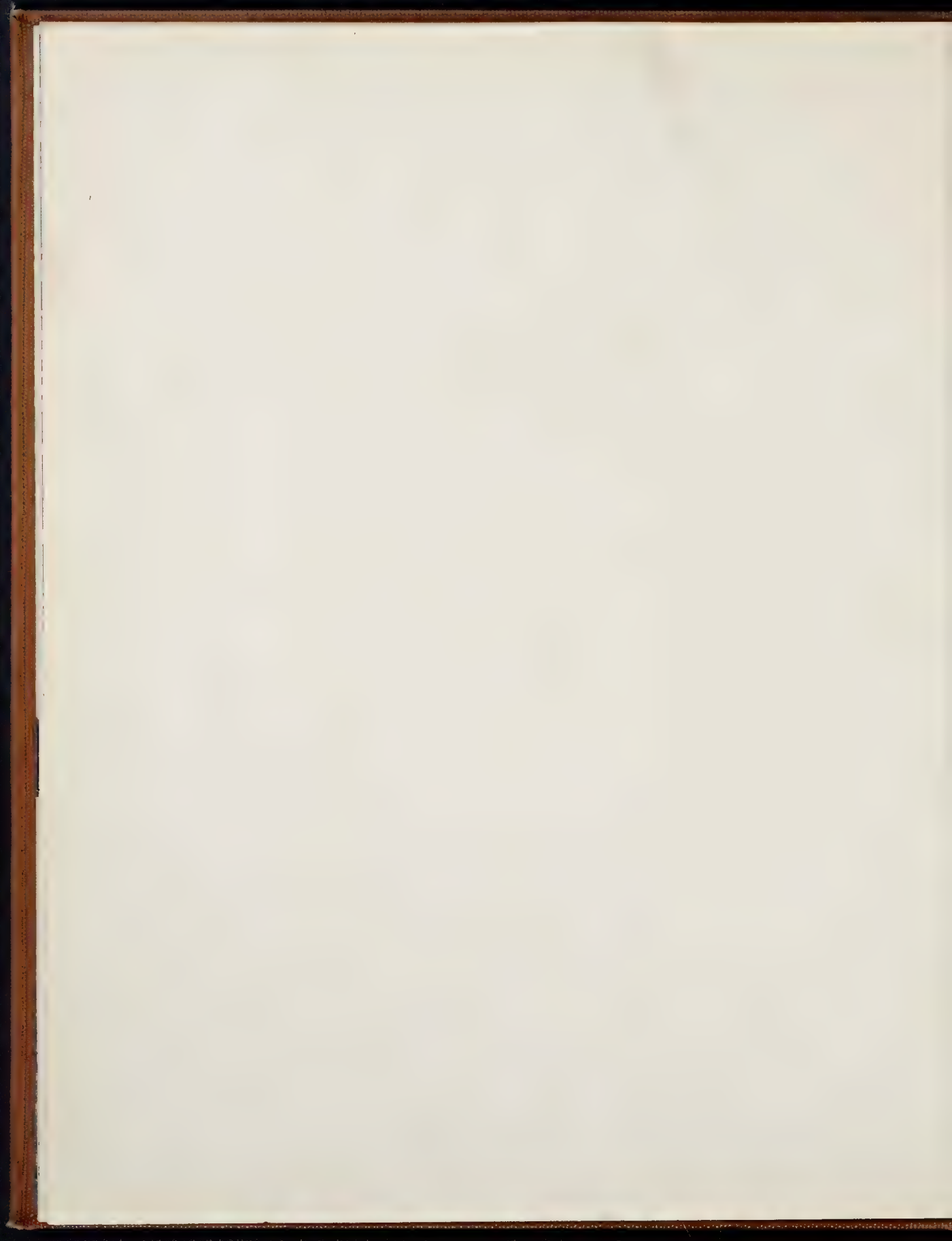
Excavations, except where there is hope of finding fallen monuments, lintels and sculptured stones, have been slight, and the time of the explorers has been given to the search for ruins and the description of such as have been found preparatory to further examination and exploration in the future. During these expeditions several sites of ruined cities, not before known, have been discovered, and are being described in the Museum Memoirs, of which this number is the seventeenth.

Other reports are in progress, and further expeditions are planned with the hope of yet finding new sites and additional inscriptions which will throw more light upon the history of this highest and most remarkable stage of culture on the American Continent.

F. W. PUTNAM.

PEABODY MUSEUM OF HARVARD UNIVERSITY,  
Cambridge, Mass., October 10, 1913.







## PREFACE

THE Peabody Museum Expedition of 1909-1910,<sup>1</sup> like so many other expeditions to Central America of this Museum, is due to the generosity and to the interest of that friend of the Museum who has made possible more than all others combined the accumulation of knowledge of Central America and the Maya civilization.

The personal thanks and gratitude of the author of this report are due especially to Mr. Raymond E. Merwin, who accompanied him on this expedition. Mr. Merwin made all the surveys on which the map of Nakum is based and also took the photographs which accompany this report.

The expedition owes much to the interest expressed and the abundant and kindly hospitality of three Jesuit priests, Fathers Bennett and Versavel and the late Father Stanton. Father Stanton enriched the collections of the University Museum by a gift of zoölogical specimens of no little value. Father Stanton's life and work among the people of British Honduras will always be an inspiration to all who knew him.

To the genial *Jefe Politico* of the District of Peten, Guatemala, Señor Don Clodoveo Berges, and to Señor Don Manuel Otero of La Libertad, a friend of long standing, no little of the success of the expedition is due. Owing to the interest and generosity of the latter, opportunities were given to make a most interesting trip to the headwaters of the Salinas River.

There should be mentioned here as well as in the body of the report the obligations of the expedition to Count Maurice de Périgny, the discoverer of the ruins of Nakum. That which we were able to accomplish at the ruins was due in great part to the fact that Count Périgny had been there before us and had laboriously cleared the site of vegetation.

A. M. T.

PEABODY MUSEUM,  
JULY 1, 1913.

<sup>1</sup> For a general report on the Expedition of 1909-1910, see Bibliography, Tozzer, 1912. For a study of the Ruins of Tikal, also a report of this expedition, see Tozzer, 1911.







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## PREHISTORIC RUINS OF NAKUM, GUATEMALA

### PETEN AREA.

FROM a study of the Maya remains as a whole several distinct areas can be distinguished, in each of which there is a certain kind of unity as regards assemblage, construction, and method of decoration. Northern Yucatan is clearly marked off from southern Yucatan. Mr. Merwin's and Mr. Hay's work in the latter region in 1911-1912 has shown that this, in turn, should be separated from the Peten district of northern Guatemala. The Usumacinta Valley ruins are, again, practically distinct from those of the Peten area. Finally, we should add the region of the highlands of the Pacific slope of Guatemala and that of southern Guatemala and of northern Honduras.

The Department of Peten in northern Guatemala together with the adjoining western part of British Honduras constitutes the most important centre of the Maya culture (Plate 31). With the exception of northern Yucatan no part of the Maya area contains a greater number of important ruined cities. From a study of the few dates on the hieroglyphic inscriptions from this region it seems more than probable that we have here the earliest remains of the Maya civilization, and it also seems clear that the culture remained at its height until well toward the time when northern Yucatan gained the supremacy in the Maya world. The arts of architecture, of stone-carving, and of pottery-making show as high a development as that reached in any other part of the Maya area and in many cases far exceed in interest corresponding features in the other regions. This is especially true in the field of ceramics, as will be shown by Mr. Merwin in his forthcoming report on Holmul.

Tikal is the most important of the sites in the Peten district.<sup>1</sup> Nakum undoubtedly comes second in point of size and from the point of view of architectural remains. Naranjo,<sup>2</sup> discovered by Maler in 1905, is most important on account of its sculptured stelae, although the buildings are entirely in ruins. La Honradez, Holmul, and Seibal 2d, all discovered by the Museum Expedition of 1909-1910,<sup>3</sup> should also be classed as ruins of major importance. Mr. Merwin's exploration at Holmul in 1910-1911 shows that we have here the most important development of pottery yet found in the New World. Porvenir, Azucar, and Tšotškitam should be mentioned as ruins only slightly behind La Honradez, Holmul, and Seibal 2d in importance.

Many smaller sites appear on the sketch map (Plate 31). It may be noted that the ruins shown on the map are simply those met with along the trails connecting the larger sites. No doubt many more sites will be found

<sup>1</sup> See Maudslay, 1889-1902; Maler, 1911; and Tozzer, 1911.    <sup>2</sup> Maler, 1908.    <sup>3</sup> Tozzer, 1912.



along the same paths on further investigation, to say nothing of the mounds in the intervening territory. These rough trails through the country follow in general the ridges, and there is little doubt that the ancient roads from city to city coincide in many cases with these modern trails of the *chichleros*.

The mounds noted on the map vary from low single structures to groups of four or five arranged around a court with others more or less detached. The large number of underground chambers or *chultunes* in the Peten area should also be noted.

The archaeological remains of the Peten area present various characteristics which mark this region off from all the other centres of the Maya culture. As already pointed out, it seems to be distinct from the region to the north embracing the southern part of the Territory of Quintana Roo and the eastern portion of the State of Campeche, Mexico.

The centre of interest in the general plan of most of the sites is a large plaza around which most of the stelae are placed. Adjoining this court on two or more sides is a system of connected quadrangles, the same building forming one side of each of two adjoining courts. Tikal, Nakum, Naranjo, and La Honradez thus present many points of similarity of plan.

The presence of stelae carved on two sides is a feature which links this area with the Usumacinta district but marks it off from that to the north. The large number of unsculptured stelae, however, is a feature uncommon in the south. The carved stone lintel of the Usumacinta is not met with here. Carved wooden lintels at Tikal seem to have taken their place at this site alone.

The roof-comb and its development may be studied to great advantage in the Peten district. The use of massive walls out of all proportion to room space is another characteristic of this area.

The general lack of extensive mural decoration is in contrast to some of the new ruins to the north discovered by the Museum Expedition of 1910-1911. The mask panel at Nakum and La Honradez links the area with that far to the north in Yucatan.

There is reason to suppose, as will be pointed out later, that this centre began very early in the history of the Maya civilization and continued to occupy an important place in Maya life for many years.

The Peabody Museum has tried to adopt a consistent policy in the plans for its annual expedition to Central America. It has been thought better to explore thoroughly the *tierra incognita* of the Maya area before undertaking a careful and detailed excavation of any one site. The expeditions of Mr. Maler in the Usumacinta region, of Mr. Maler, the author, and Mr. Merwin in the Peten district, and of Mr. Merwin and Mr. Hay in southern Yucatan have made us acquainted with the most important sites in a region hitherto practically unknown. After all the various regions have thus been investigated the time will then come for detailed study of those regions and sites which appear to offer the most important points needed to solve the various problems of the Maya civilization.

## GENERAL CONSIDERATIONS.

**Situation.** Nakum is almost directly north of Lake Yaxha (Plate 31) and about half-way in an air line between Benque Viejo and Tikal. It is situated in  $17^{\circ} 3' 40''$  north latitude and, roughly,  $89^{\circ} 30'$  west longitude.

**Topography and Water Supply.** The greater part of the Department of Peten is a rolling plain with few high elevations. The region occupied by Nakum is generally level. The ground to the south and west of the ruins falls off rapidly to the bed of a stream which flows in an easterly direction around the southwestern and southern sides of the city. There are partially artificial terraces on the southern and western side. The southeastern corner of this terrace is seen in Plate 48, 1.

The region is exceedingly healthful in the dry season, and water is abundant for the greater part of the year owing to the damming up of the stream just below the ruins. On account of the unfailing supply of good water work can be undertaken here much more easily than at Tikal, Naranjo, or La Honradez, where the water supply is from *aguadas* which are likely to dry up toward the end of the dry season.

**Name.** It will be noted that I have taken the liberty of changing the spelling of the name of the ruins, given finally by Périgny as Nakcun, to Nakum. This explorer in his first mention of the site (1906 and 1908) called it Nacun. This seems to me a more correct form than Nakcun, which he employs in his later descriptions of the ruins (1910, 1910 a, 1911 and 1911 a). At the present time the Maya language is practically not spoken at all in the vicinity of the ruins, and it is impossible to determine therefore from those who speak Maya the real name of the region occupied by this ruined city. Nakum seemed quite as correct a form as Nakun in the opinion of the present population of the country. Nakum has in its favor the fact that it is a purer form of Maya. *Na*, the word for house, is a very natural component of a name given to a ruined city, and *kum*, written also *cum*, meaning *olla* or vessel, is also associated with the ruins. The word "Nakum" would therefore mean the "house or place of the ollas." As Mr. Thompson writes in a personal letter, "He or they who first came upon the ruins, probably as hunters or *milperos*, may have found in some of the ruined chambers incense-burners and votive vessels or the fragments of these vessels scattered around in profusion and so called it, the house or the place of the pots or vessels." The custom of the Lacandonos (Tozzer, 1907) in placing incense-burners of their own manufacture in the ruins at the present time should be noted in this connection.

It must be confessed that the more proper form of the term would be Kumna as Labna, old houses, the name of a group of ruins in northern Yucatan.

**History of the Site.** Nakum has had a short history as compared with that of Tikal. Gatherers of *chicle* visited the ruins over fifteen years ago, but Count



Maurice de Périgny was the first one to make known to the scientific world the presence of the ruins. He visited the site on his expedition of 1905-1906. The situation of the ruins first appears on his map (1908), but he makes no reference to the site except in the first paragraph of his paper, where he groups it with Tikal, Uxmal, and Chichen Itza in importance and states that he discovered the ruins in 1905.

Maler has Nakum, written Nakcum, on his sketch map (1908, p. 56), but it is incorrectly situated to the northeast of Holmul. He did not visit the site.

Périgny returned to Nakum on his expedition of 1909-1910 under the auspices of the Ministère de l'Instruction publique and the Société de Géographie. He spent about six weeks at the ruins, clearing the site of vegetation, cutting down trees, and thus making possible the photographing of the ruins as a whole. So great was the labor expended in the work of clearing the site that little time was left for excavation.

The Peabody Museum Expedition of 1909-1910, on hearing reports of the ruins of Nakum from several sources, planned to visit the site. Word was received that Périgny was already on his way there from Coban. Plans were therefore changed so that Périgny, the real discoverer of the ruins, might not be anticipated in his work. I had the pleasure of renewing my friendship with Count Périgny at El Cayo as he was on his way to the ruins, and I told him of our intention to visit Nakum on his departure. I further assured him that my publication on Nakum would be delayed until his report had appeared. As his papers on this ruin have been published (1910, 1910 a, 1911, 1911 a) I feel it no longer necessary to withhold this report.

Too much credit cannot be given to Count Périgny for his discovery of the ruins, his perseverance in reaching Nakum from Coban, and the labor expended in clearing the site. Our thanks are due him for the latter, as it made our work comparatively easy. As he expresses it (1911, p. 15), "Après mon départ, des archéologues américains se sont rendus à ces ruines de Nakcum. Quelque soit le résultat de leurs propres travaux, nous ne pouvons que nous féliciter, pour le bon renom de la science française, des recherches ultérieures entreprises à Nakcum puisque, grâce à l'intérêt que le Ministère de l'Instruction publique et la Société de Géographie ont bien voulu porter à ces études, c'est à elle que revient l'honneur de la découverte et du premier déblaiement de ces ruines."

The Peabody Museum Expedition of 1909-1910 spent from February 27 to March 21, 1910, at the ruins. The Museum Expedition of 1910-1911, under the charge of Mr. Merwin, revisited the site on its way to photograph a stela reported north of Nakum (Plate 53) at a site called El Encanto (Fig. 101). No work was done at the ruins at this time.

The expedition of 1909-1910 attempted a partial survey of the site. The principal structures were located by means of a transit. This part of the work and that of photographing were in charge of Mr. Merwin, to whom my acknowledgment has already been made. The smaller structures were located with far less accuracy. The major buildings, lettered on the map (Plate 32), are accurately placed, but the position of the ruins which are numbered on the map should be regarded as only approximate. The survey did not include the long Northern Extension. A small amount of excavation was undertaken, consist-

ing mainly of clearing three *chultunes* and rooms in Structures E, N, and R, and the southern tower of Temple A.

The present paper should be considered in every sense "preliminary," as a thorough exploration of the site could be completed only after several years of careful work. This could be most profitably undertaken, as the site is most important and presents many most interesting problems of Maya archaeology.

Care has been taken in the plans of the various buildings to indicate by solid black only those parts of the structures where the walls were actually seen in place. All other parts are shown by dotted lines. There is no doubt that further excavations will show that many changes are necessary in the detailed plan of many of the buildings.

**Approach to the Ruins.** The easiest way of reaching Nakum is by boat from Belize, British Honduras, to El Cayo at the head of navigation of the Belize River. During the greater part of the year motor boats run up this river at frequent intervals. Toward the end of the dry season *pitpans* are used. From El Cayo a good wagon road has just been completed to Benque Viejo, the frontier town, three leagues away. El Cayo and Benque Viejo are the headquarters of many of the *chicle* companies which operate through northern Guatemala and western British Honduras.

Count Périgny reached Benque Viejo and El Cayo by travelling overland from Coban. This is a long and difficult trip and is not to be recommended. The approach from the west by way of the Usumacinta River is also far more difficult than that by way of Belize.

Owing to the extensive trade in *chicle*, trails run in every direction throughout this region. It is seldom necessary to cut paths for any great distance in order to reach the ruined sites. This is a great saving of labor, and the information gained from the *chicle* gatherers is most useful in locating ruins. In addition, food supplies are comparatively easy to obtain owing to the fact that the mule trains of the *chicleros* can often be depended upon for bringing in supplies. They go out loaded with the gum and are usually glad of a return cargo.

From El Cayo the trail runs directly west to Buena Vista. Here the Belize River is crossed and a general northwesterly direction is taken. It may be helpful to future travellers to note some of the various camps for mule trains along the way. Four leagues from Buena Vista is Chunvis. Just before reaching this camping site it is possible to turn almost directly west to the camp of Invierno belonging to Don Benigno Silva, thence to the ruins of Naranjo (Maler, 1908). By continuing west from Naranjo a short distance and then turning north a trail may be taken which eventually reaches Nakum. This route is not recommended.

A more direct way is to take the trail running northward from Chunvis over a steep and high hill where the path divides. It is possible to reach Nakum by either of the two trails. By taking the one running west, after passing several abandoned *chicle* camps (Jato de Juan Cruz, etc.), you reach the trail from Naranjo to Nakum coming in from the south. By continuing straight on in a northwesterly direction, passing the Jato de Solomon, also called Invierno, the ruins are finally reached. This is the shortest way to Nakum, but there are many turns and many side trails which are perplexing. By keeping on directly north



from Chunvis some distance beyond the trail to the west, just described, you make a long turn to the west and south, passing El Rio and Laguna Colorada, and finally run into the same trail already mentioned. The ruins are about one-half a league to the west of the main road, which continues northward.

The relative distances may be approximately determined by consulting the map (Plate 31). It is quite possible to make the trip from El Cayo to Nakum in two days but with a loaded mule train three or four days are usually necessary.

**Labor.** There are several possibilities in regard to the question of workmen. Périgny employed Indians whom he brought overland from Coban. The trip is a long and difficult one, as there is no direct trail. The Cobaneros are usually willing to bind themselves only for a short time and then insist on returning to their homes. Périgny also obtained Indians from San Andres, a *pueblo* on the shore of Lake Peten, near Flores. These men are good workers, but are usually willing to hire themselves out only after a request from the *Presidente* of the *pueblo* and that of the *Jefe Político* of the district.

A few men may generally be picked up at El Cayo and Benque Viejo. These are usually either Indian or "creole." During the *chicle* season labor is very scarce in these towns, and one cannot depend upon any large number of men for any length of time. The Peabody Museum Expedition of 1910-1911 used "creoles" from Belize with success. These men will sign contracts and are, on the whole, more to be depended upon than any other class of workmen available in this country.

In taking workmen from British Honduras to Guatemala it is necessary to furnish a bond of \$4,000 to the British authorities at Belize to cover wages and other costs. This amount does not depend in any way upon the number of men engaged.

**Size.** The main group at Nakum is about 1,350 feet from north to south, and 1,000 feet from east to west; 2,000 feet should be added to the length of the city from north to south if the Northern Extension is included in the measurement. The city proper covers only about a third of the ground occupied by the ruins of Tikal.

**Assemblage.** The unit in the grouping of the buildings at Nakum, as in all the other ruins of the Peten area, is the court or plaza. There is a system of connected courts, and the plan presents a compact whole with a comparatively few mounds which seem to stand disassociated from any surrounding structures. The Northern Extension (Plate 33) is unique, being a broken line of low mounds connecting the northern outpost of the city with the main group.

The plan of a site like Tikal or Nakum presents an entirely different appearance from that of one of the northern Yucatan cities. The latter has little unity, and the buildings appear to have little relation to each other. There is nothing in the topography of the country to the north to prevent a compact and well-oriented plan. The Usumacinta Valley sites are, again, quite different from those of the Peten area. In the latter the topography does undoubtedly prevent any unity in the plan of the whole city.

The plan of Nakum (Plate 32) in several ways suggests that of Tikal (Tozzer, 1911) and La Honradéz. In each of the three cities there is one plaza which seems to be more important than any of the others. At Tikal and at Nakum the most important buildings are grouped around this court. At all three

cities the greater number of stelae are found in this court, and are closely correlated with the structures forming the sides of the plaza. At Nakum there is found one considerable elevation and at Tikal three crowned with buildings which we have called acropoleis. The long Northern Extension at Nakum may be pointed out as equivalent to the northern suburb at Tikal.

The three cross-sections through the ruins (Plate 34) give a good idea of the different levels of the various courts and the relative heights of the buildings. Court XIII, on the northeastern corner of the site, is the lowest, the level of the Great Plaza being slightly above this. The courts surrounding the Acropolis are higher still. These sections make clear how the whole site presents a well-knit-together appearance, a unity in plan not found in any other of the Maya areas.

**ORIENTATION.** The buildings all face roughly one of the cardinal points. Unfortunately it was impossible to find the front wall of a single building in a position so that a careful orientation could be determined. The only wall which was available for a careful survey was the back wall of the inner room of Temple A. Mr. Merwin found that this was  $3^{\circ} 42' 20''$  east of north, referred to the true meridian. It is worthy of note that the four temples of Tikal which were orientated (Tozzer, 1911, p. 106) were also all east of north. The smallest amount of variation from true north of the back inside walls of the Tikal temples was  $8^{\circ} 57' 45''$ . It will thus be seen that the back wall of Temple A of Nakum is much nearer the true meridian.

Professor Robert Willson, who has been much interested in the question of the orientation of pre-historic buildings, has suggested to me the possibility that the true line of sight was neither the front walls of the buildings nor the inside wall at the back, but rather a line running at right angles from the inner back wall of the building to the front of the structure directly in the middle of the main doorway. This is an important subject of investigation and one which should not be neglected by future explorers in Central America.

**Construction.** It is no longer a novelty in discussing the Maya system of construction to point out the similarity between the form of masonry in some of the Maya sites and the modern system of concrete walls. Nakum furnishes many excellent examples of the non-structural character of the outer facing of stone. This serves simply as a veneer, covering an interior of concrete, a mixture of stone, sand, and lime. The weight of the building rests on this interior mass, and the fall of the outer covering of stone in no way impairs the strength of the building. In fact, the outer covering has in most cases fallen off, as can be seen in Plate 38. No. 3 of this plate shows the lines made by the stone formerly veiling the interior mass. It was difficult to find a single front wall still intact. The same screen-like covering of stone over the mass of concrete is seen in the interior walls. Plate 39, 1, shows this wall facing fallen away slightly from the interior.

Several of the structural weaknesses of Maya architecture appear at Nakum. The use of the wooden lintel is responsible for the fact of the fall of almost all the outer doorways. These are generally wide and the stone lintel is therefore not used to span the openings. When the entrances are narrow, as at Yaxchilan, and the stone lintel is employed, the buildings usually present a well-preserved façade.



Another element of weakness is the failure to use binding stones between the interior mass of concrete and the outer stone covering of the walls. The backs of the facing stones are flat and do not bite into the concrete behind. When the outer facing is composed of carved stones to form some design, it is much more common to find these blocks set into the mass behind with tenons. Some of the northern Yucatan buildings show fine preservation owing in part, no doubt, to this fact.

The firm character of the concrete is to be noted in Plate 39, 3, where only a portion has fallen in spite of the fact that the wooden lintel has disappeared.

**SUBSTRUCTURES.** The Acropolis mound (Plate 47, 1), which stands near the southern end of the city, is probably entirely artificial. The wide space on top places it in a class by itself, differing from the usual pyramid temple.

The temple mounds show less uniformity here than at Tikal. Some of them were undoubtedly terraced, while others have almost vertical sides and are more in the nature of high platforms than pyramidal substructures. In general the supporting mounds are not so high as those at Tikal.

The substructure of Temple A (Plate 40, 1) differs from that of any of the other buildings. A long mound is divided at the top into three sections, on the central one of which the building is placed. Temple V (Plate 49, 2) shows two low mounds at either side of the main structure. Temple E (Plate 44, 1) and Temple N (Plate 45, 1) also have variations from the single square-topped pyramid.

**STAIRWAYS.** The stairways in front of the pyramidal temples are similar to those at Tikal. They rise at a lesser angle than the foundation mounds and therefore project from the base of the substructure. In one case (Temple C, Plate 41, 2) several steps are still in place. The width of these is 10 inches and the height, 14 inches. The side retaining wall is still preserved in Temple U. There are no interior stairways as far as can be made out.

**SUPERSTRUCTURES.** *Types of Buildings.* In most cases it is possible to distinguish the two types of structures usually pointed out in Maya buildings, the pyramid temple and the residential type. The two are not as closely differentiated here at Nakum as at Tikal, where all the temples have the projecting portion at the back and the indentations at the sides together with the same arrangement of rooms, one behind the other. The pyramid temples at Nakum are usually more complicated as regards their plan and are not by any means uniform.

A development of the lateral chambered temple is to be noted at Nakum. Temple A might be classed with Structure 27 at Tikal. Both are built on high mounds and each has three entrances and two ranges of rooms. There is a decided tendency at Nakum to have single chambered buildings on the top of the mound at either side of the main structure. In Temple E (Fig. 57) these lateral chambers are wing-like projections from the main building. In Temple N (Fig. 65) the side chambers are in detached buildings at right angles to the main structure. The mounds at either side of Temple V (Fig. 81) may show another variation of the same idea.

The temples at this site with one exception do not show the huge masses of masonry in proportion to room space as at Tikal.

The residential type of structure is, in general, similar to the corresponding

type at Tikal, two series of rooms running lengthwise of the building with a single transverse room at either end. Successive additions to the general plan are often to be noted here.

In the restorations which have been attempted in the cross-sections of the site (Plate 34) the buildings have been shown as having flat roofs. There is little doubt that the sloping roof as well as the sloping upper zone of the façade are uncommon features here. It must be admitted that the question of the roof-form of the buildings and the finish of the upper part of the façade is only one of many which can be answered only by further investigation.

*Roof-combs.* Roof-combs are not an important feature at Nakum. There is the greatest contrast between the massive roof structures on the Tikal temples and those at Nakum. In most cases the roofs of the temples here have fallen, but there is little evidence that the heavy roof-combs of Tikal are to be found at Nakum. The towers of Temple A (Plate 40 and Figs. 51, 52) are an interesting modification of the roof-comb. Here we find massive walls of the buildings proper, several times wider than the rooms themselves, and heavy enough to support great weight. The roof-comb has been split up into three tower-like divisions. In the interior of each there is a small room. Long narrow perforations of the comb from front to back are also to be noted. These have no connection with the inner room.

The purpose of the roof-comb and the so-called flying façade seems to be identical throughout the Maya area, a place for decoration and for nothing else. The first attempt at a high superstructure is probably seen at Tikal. As a result of the desire for a high roof-comb, it was thought necessary to have a very massive pile of masonry on top of the building. In order to support this excessive weight the walls have to be made of great thickness with a consequent sacrificing of room space. Dr. Spinden (1912, p. 170) suggests a chronological arrangement of the five great pyramid temples at Tikal from a study of the relative amount of room space to wall space. There is no doubt that experiments were made by the builders at Tikal to lighten the mass of the roof structure. The discovery of the interior spaces in the roof-comb of Temple V at Tikal (Tozzer, 1910, p. 100) seems to show the beginning of this attempt to lessen the weight on the walls of the building. A similar advance is to be noted here in the towers of Temple A. The interior space in each of the three towers corresponds exactly to the similar phenomenon at Tikal. These interior spaces cannot be called rooms, as there are no traces of entrances. A further step is also to be mentioned here on Temple A. The perforation of the mass of the roof-comb from front to back by long narrow rectangular openings, having no connection with the closed-in interior spaces, is another attempt evidently to lessen the weight on the walls.

There seems to be little doubt that this type of roof-comb on Temple A marks the turning-point in the history of this superstructure in the central Maya area. The perforations from front to back show the beginnings of a movement which led to the light lattice-work type of roof-comb seen on many of the sites in the Usumacinta area (Yaxchilan, Piedras Negras, and Palenque). The interior spaces, at the same time, suggested that the roof-comb could be built with a corridor-like room running lengthwise of the superstructure. The roof-comb of the Tzendales ruin shows this stage of the process.



The Tower at La Honradez presents another line of development where the roof structure, like those of Temple A, is massive, but the interior room of the building itself runs up into the interior of the comb, thus combining in one high vaulted room the ordinary chamber of the structure and the interior space of the roof-comb proper.

*Vaults.* The typical Maya over-stepping vault is commonly employed in the interior of the buildings. The narrow room and the high vaulting of the interior rooms of Temple A recall the vaulting of the Tikal temples.

There are two examples which seem to show the nearest approach to a true concrete arch yet found in the Maya area, the two lateral doorways in Temple A (Plate 40, 1 and Fig. 51). By a close examination of the masonry it seems impossible to believe that these could have been constructed without some temporary wooden form. The unevenness of the spring of the arch is to be noted. Périgny (1911, Plate XI, Fig. 2) shows one of these doorways in detail. Neither of these arches shows the usual shoulder at the spring of the vault. This might invalidate the theory of Spinden that the shoulder is necessary in order to remove the wooden form. Mr. Merwin has found several vaults in the ruins in southern Yucatan which do not have this shoulder. With the exception of the two doorways in Temple A all the other vaults at Nakum show the offset at the spring of the arch.

The Maya vault has been much discussed. It is in no sense a true arch, but a corbelled or false arch with a cap stone in place of the key stone. In many cases the sloping sides of the vault meet at the top and the cap stone is not visible from the floor of the room. Dr. Spinden (1912, p. 109) has suggested that an interior form of wood was necessary in the erection of these vaults. This is possibly true in a few cases where the stones of the vault do not rest squarely upon each other but touch only at the outer edges. Dr. Spinden (1912, Plate 4, Fig. 2) shows an example of such a vault from the ruins of Labna. The northern end of the room in Temple V (Plate 39, 1) at Nakum shows a vault where the stones rest squarely on one another. No temporary wooden form would be necessary in the erection of this vault. Numerous examples of wooden beams crossing from one side of the vault to the other are noted especially at Tikal. These support the thrust of the vault, and were evidently placed in position at the time of erection. Fig. 77, *d*, shows these beam holes. Temporary forms would be impossible in such a case. It is therefore better not to lay too much emphasis upon a single method of construction of the Maya vault.

An interesting arrangement of the stones at the top of the vaulting is seen in one of the rooms in Structure D (Fig. 56).

*Doorways.* The doorways are similar to those at Tikal. In the temples there is usually a single entrance formed by several wooden beams placed side by side. Stone lintels are employed usually only over the narrow interior doorways. No carving is seen either on the wooden lintels, as at Tikal, or on the stone lintels, as at Yaxchilan. The most interesting doorways are in Temple A. Mention has already been made of the concrete arches of the two side entrances to the inner chamber of this building. The middle one (Plate 39, 4) shows the flat wooden lintel.

*Wall Openings.* There are few openings in the walls at Nakum as compared with those at Tikal. There is none that may be called a window. The nearest

approach to a window is the circular opening in the northwestern room of Temple N (Plate 46, 2).

Often the wall is pierced by a large number of small holes a few inches in diameter. Cupboard-like depressions were found in a few cases. One of these in the Southern Annex of Temple N had an opening at the back running completely through the wall (Plate 51, 5).

The tie-hole (Plate 51, 3, and Fig. 69), a depression in the wall with a stick running across it embedded in the masonry on each side, was found in the upper chamber of the Southern Annex of Temple N. A similar feature was found at either side of the outside doorway of Temple I at Tikal, and there is little doubt that they were used to suspend curtains before the doors.

*Floors.* The floor of the rooms is in all cases finished with a layer of smooth plaster. Game-like designs (Fig. 49, *e* and *f*) in some cases are scratched upon the floor.

Double floors were found in the upper chamber of the Southern Annex of Temple N and in the southern tower of Temple A (Fig. 52). This is by no means an uncommon feature in Maya construction. The lower floor in the Annex of Temple N is 2' 6" below the upper one. In the tower of Temple A the floors are a little over 2' apart. In each case the lower floor shows a finer finish. No satisfactory explanation can be suggested to account for these double floors.

In the top of the bench in Temple E there is a bowl-like depression (Plate 51, 4) beautifully lined with plaster. It had clearly not been used as a fireplace, but perhaps as a receptacle for a liquid offering, assuming that the bench is an altar.

The northern room of Structure R shows a depression in the floor which appears as if it had been used as a fireplace (Fig. 77, *c*).

*Benches.* The use of stone or rubble benches was noted at Tikal. They are sometimes in the nature of platforms running along the inside wall of the room. At Nakum several of these are found. Temple E has a bench running almost completely across the back half of the room, and around the northern end of the room (Plate 51, 4). A small bench is noted in the northwestern room (6) in Temple N, before a circular opening in the wall. One in the northern room of Structure R (Fig. 77, *d*) has arm-like masses of masonry at each end, against the wall. It is difficult to determine the use of these platform-like elevations. The first idea which presents itself is that they were used as altars.

*Decoration of the Buildings. FAÇADES.* Tikal is singularly barren in architectural decoration. At Nakum the desire for severity is carried to an extreme. At this site there is little to show the Maya love of decorative display. The façades are almost entirely plain, broken by a simple medial moulding. The cornices are usually quite as undecorative as the mouldings, often no more than the simplest of string courses. The northern side of the main building of Temple N (Plate 46, 2) gives a good idea of the usual arrangement of the façade at Nakum. The lower zone is plain with a slight projection of the wall at the corners of the building. This wall in all cases is covered with a fine layer of plaster. The medial moulding is usually very plain, composed of a string course projecting from the wall a few inches. Above this the stones of the upper zone appear at the present time very uneven and uncovered by plaster. It is usually impos-



sible to determine the former character of this part of the wall. There is little doubt that some simple form of stucco decoration covered the rough stones.

**MASK PANEL.** The mask panel is almost the only form of design now to be found on the Nakum structures. It is far less uniform than those in the ruins of northern Yucatan, and many of the elements usually associated with the mask panel, as given by Spinden (1912, pp. 118-124), are lacking. The masks are usually built up of stone with many of the details added in stucco.

The mask (Fig. 53) which forms the central part of the design on the front of the middle of the three towers of Temple A shows simply the face with the nose plugs forming the most prominent feature. It is quite unlike the usual form of mask panel.

Masks were noted on Structures F (Fig. 59), G (Plate 51, 1), L (Plate 51, 2), and S (Fig. 79). The spiral design was common in many of these masks, forming a lateral decoration on that of G, the superior eye ornament on the design of L, and the eye itself on the mask of F. The eye, composed of a small round stone set into a large square opening, is characteristic of the masks of Structures G and L. The ear plug is to be made out on the design of L. Feathers as a lateral decoration are plainly visible on the masks of F and possibly that of S.

A stucco design on the northern façade of Structure R (Fig. 76) is worthy of mention in connection with the mask decoration. It seems to form a part of the lateral design of a mask. The ear element is almost exactly similar to that of the mask of Structure S (Fig. 79), and the serpent or feathers design forming the lateral ear ornament encloses a seated figure.

In considering the decoration of the buildings mention should be made here of the two stelae, N<sup>2</sup> and U, which show the usual type of Maya design, the elaborately decorated human figure with feather headdress. These two monuments form the only exception to the statement that little design other than mask forms is to be found at Nakum. It is probable, however, that further exploration will reveal other forms.

**INCISED AND PAINTED DESIGNS ON WALLS AND FLOORS.** The incised and painted designs found on the walls and in a few cases on the floors of the buildings at Nakum are not as elaborate as those noted at Tikal. These crude figures have never been satisfactorily explained. There is some probability that they were made by early pre-Columbian visitors to the ruins who were not necessarily contemporaneous with the occupation of the city. A very few of those found are reproduced here, and these require little notice.

There seems to be no intentional grouping of the figures, and no significance need be placed on the relation of the various pictures found in the same room to each other. There is no great difference noted between those painted and those incised. Temple E has the greatest number of figures, the walls being literally covered with designs, some of which cover several feet. The serpent appears in various ways here.

The human form is common in the Nakum figures. Fig. 48, *a*, shows a man in profile with a face with ape-like characteristics. Fig. 48, *b*, is a figure in front view possibly, with a feather decoration on the head and also hanging from the elbows and the side of the body. Fig. 48, *c*, probably represents a person speaking, although the speech signs so common in some of the ruins in northern Yucatan are not usually found in this area. Fig. 48, *d*, seems as if it might be post-Columbian

with buttons indicated on the body. The feather element rises from the top of the head. A single face (Fig. 48, *e*) appears as one of the designs in Temple A.

One of the best executed figures, a swastika-like design in red paint, is on the back wall directly in front of the door of Temple E (Fig. 48, *f*). Another painted design (Fig. 48, *g*), in the same room, is difficult to explain. The elaborate stepped pyramidal temples incised on the walls at Tikal (Maler, 1911, Figs. 9

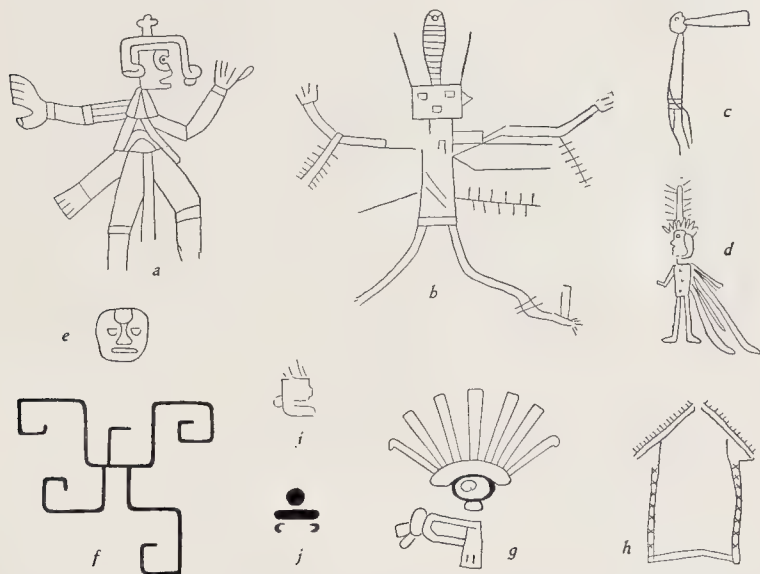


FIG. 48. — *a*, Temple E: western wall, figure in black paint; *b*, Temple E: eastern wall, figure in black paint; *c*, Structure R: northern room, incised design; *d*, Acropolis: incised design on building; *e*, Temple A: incised design; *f*, Temple E: design in red paint; *g*, Temple E: painted design; *h*, Temple A: incised design; *i*, Temple N: Northern Annex, lower chamber, incised design; *j*, Temple N: Northern Annex, lower chamber, painted number.

and 13) do not appear here. A single design (Fig. 48, *h*) may show a thatched house.

Several glyph-like forms are found on the lower chamber of the Northern Annex of Temple N. Here alone there may be some connection between the different figures. Varieties of Fig. 48, *i*, appear four times, and Fig. 48, *j*, in red paint, may indicate the number 11, two bars and one dot, the lower bar being partially erased. Geometrical forms are most numerous in the incised designs. Fig. 49, *a*, from Temple E, and Fig. 49, *b*, from Structure D, are somewhat similar. A cross form (Fig. 49, *c*) appears in Temple N, and a more elaborate and more carefully drawn geometrical figure in black paint in Temple E (Fig. 49, *d*).

Two of the designs found incised on the floors of the buildings are similar, Fig. 49, *e*, in Temple A and Fig. 49, *f*, in the upper chamber of the Southern Annex of Temple N. These may have been used in connection with some game. A

figure strikingly similar appears on p. 19 of the "Tonalamatl Aubin" (Fig. 49, *g*) in connection with the god Xochiquetzal and a ball-court.

**Stelae and Altars.** Fifteen stelae are noted at Nakum and eleven altars.<sup>1</sup> There is no doubt that several more will be found when a more thorough investigation of the ruins is undertaken. These are all closely correlated with the buildings in front of which they are found. No isolated stelae and altars dis-

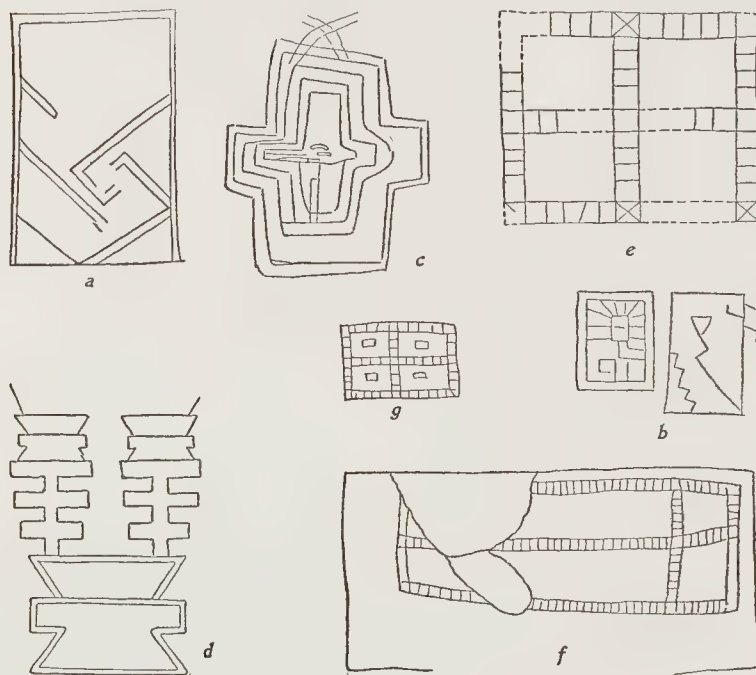


Fig. 49.—*a*, Temple E: western wall, incised design; *b*, Structure D: incised designs; *c*, Temple N: Northern Annex, lower chamber, western wall, incised design; *d*, Temple E: western wall, design in black paint; *e*, Temple A: southeastern room, incised design on floor; *f*, Temple N: Southern Annex, upper chamber, incised design on floor; *g*, design on p. 19, "Tonalamatl Aubin."

associated with structures are noted, as at Tikal. Only two of the stelae are found outside the Great Plaza. Carving is noted on only three stelae.

It was naturally a great disappointment to find so few of the stelae carved. Most of those around the great plaza had fallen, and jacks were included in our

<sup>1</sup> List of stelae and altars at Tikal:

Temple A,	6	stelae,	6	altars,	all	plain.
" B,	3	"	2	"	"	"
" C,	1	"				carved.
Structure D,	3	"	2	"		1 stela carved.
Temple U,	1	"				carved.
Northern Extension,	1	"	1	"		both plain.



outfit to be used in raising or turning these stones. By a slight excavation under the face of each stela it was easy to ascertain whether or not it was decorated with carved designs. One after another proved to be plain. The only stela which shows any large number of glyphs is that still standing before Temple C.<sup>1</sup>

Stela C (Plate 52, 1) has an inscription consisting of nine double glyphs arranged in a single vertical line. Unfortunately the inscription is badly weathered. The glyphs have a curiously squarish appearance. The number nine is made out on the second glyph and on the fifth there is a Tun symbol with two bars above it. None of the other characters were made out.

Stela D, thirty feet in front of the north side of Structure D, has fallen and is badly broken. A fine design once covered the face of this monument (Plates 42 and 43, 1). Plumes of a headdress appear on one of the stones, and a line of crude glyphs probably formed the top of the design.

Stela U (Plates 44, 2 and 52, 2) is still standing directly in front of the stairway of Temple U. The design has almost entirely disappeared. Only a few feathers of a headdress can be made out. Mention should be made of the groove cut around three sides of this stone near the bottom.

This completes the description of the carved stelae at Nakum. The failure to find decoration on the faces of the monuments at Nakum, coupled with a corresponding lack of design on many of the Tikal stelae, strengthens the idea which I advanced in my report on the latter city, that there was probably at one time some form of painted design adorning the smooth faces of these monuments.

Mention should be made at this place of the stela found by Mr. Merwin at the ruins of El Encanto, about sixteen miles northwest of Nakum. This small stone formerly had a design on its face and a hieroglyphic inscription on either side (Plate 53 and p. 194). It is surprising to find a sculptured stela at so unimportant and so small a group as El Encanto when the whole site of Nakum has only three worked monuments. It is evident that the size of the group in which the stela is found is no criterion for the sculpturing of its stelae. The two most beautiful worked stones at Tikal, Stela 16 and Altar 5, were found tucked away in the centre of an insignificant group of low mounds in the western part of the city and not connected in any way with a building.

<sup>1</sup> The stela at the neighboring ruins of El Encanto (Plate 53 and p. 194) has an inscription on either side.

## DETAILED DESCRIPTION.

In order to make as clear as possible the detailed description of the site I have numbered the courts with Roman numerals with the exception of the largest court on the north, which I have called the "Great Plaza." Several of the smaller outlying buildings I have called "Groups" rather than "Courts." The Acropolis will be considered a unit by itself as well as the Northern Extension.

### THE GREAT PLAZA.

This, as has been pointed out, is the most important feature in the plan of Nakum. A good idea of this court is given in Panorama 1 (Plate 35, 1) showing

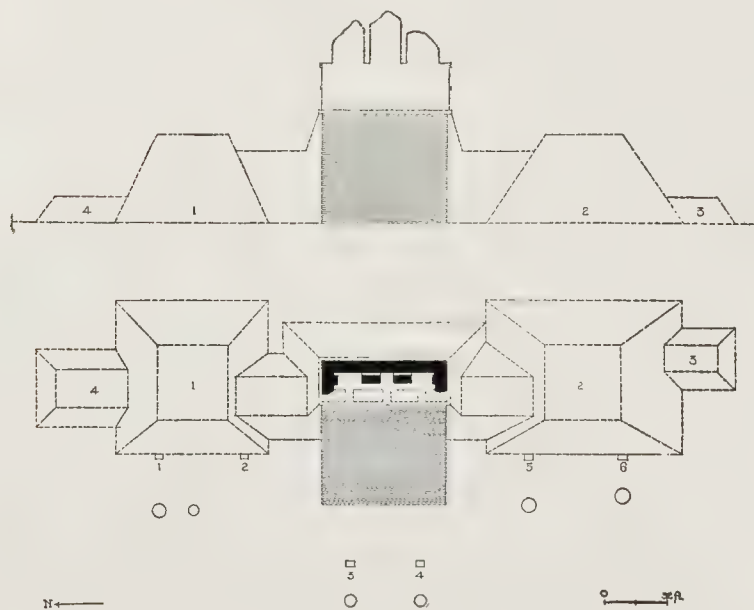


FIG. 50. — Temple A: elevation and plan of structure with Mounds 1-4, and stelae and altars.

Temple A on the east, Temple C on the west, and Structure D occupying the entire southern side. Twelve of the fifteen stelae are found around this plaza.

**Temple A.** In several respects Temple A (Plate 40 and Figs. 50-52), which

forms with its mounds the eastern end of the Great Plaza, is the most interesting building at this site. The whole edifice consists of a high central mound flanked on both sides by connecting lower structures (**Mounds 1 and 2**). These lateral structures are flat on top with no traces of buildings. They probably had stairways on the western side.

On the level of the Plaza and in front of each of the three sections of Temple A are two unsculptured stelae (Fig. 50) with rounded tops and their accompanying altars, also plain. The stelae<sup>1</sup> are symmetrically placed in reference to the

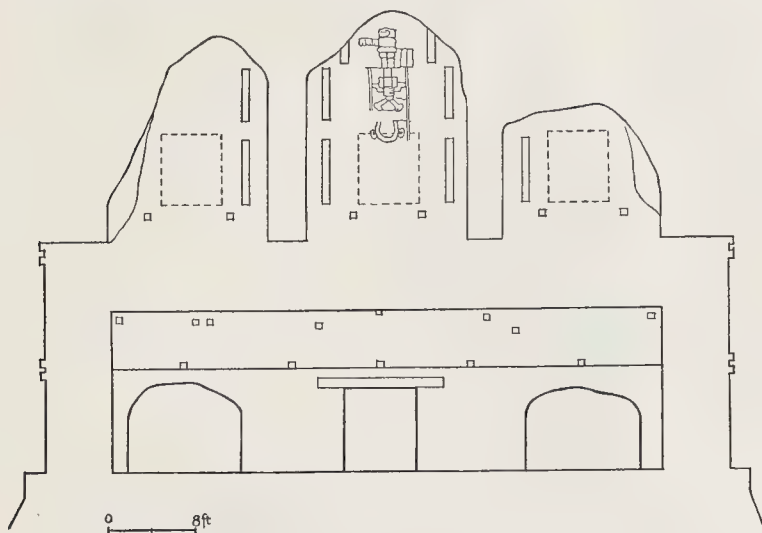


FIG. 51. — Temple A: elevation of main building.

three parts of the structures, whereas the altars are not in every case in front of the stelae.

The building proper is on the high central mound. It faces the west toward the Great Plaza and is approached by a stairway on this side. It might be called of a modified temple type and presents several unique features. The elevation (Fig. 50) shows the relative heights of the main building and the lateral mounds (1 and 2) as well as the low mounds (3 and 4) at the ends.

The three tower-like roof-combs of the main structure (Plate 40 and Fig. 51) serve to give the building a distinction not shared by others at Nakum. These

<sup>1</sup> Dimensions of stelae and altars of Temple A:

Stela A<sup>1</sup> 11' 6" × 3' 10" × 2' 4".

Altar A<sup>1</sup> 7' 3" in diameter, 1' 6" thick.

Stela A<sup>2</sup> 12' 9" × 3' 8" × 2' 6".

Altar A<sup>2</sup> 5' 9" in diameter, 2' 9" thick.

Stela A<sup>3</sup> badly broken.

Altar A<sup>3</sup> " "

Stela A<sup>4</sup> 9' 7" × 4' 4" × 2' 7".

Altar A<sup>4</sup> 6' 5" in diameter, 1' 9" thick.

Stela A<sup>5</sup> badly broken

Altar A<sup>5</sup> " "

Stela A<sup>6</sup> 7' 3" × 4' 5" × 2' 6".

Altar A<sup>6</sup> 7' 7" in diameter, 1' 10" thick.



superstructures were built over the thick wall between the rooms below. The tops of the towers are in ruins, but there is reason to suppose that they were all of the same height. A small portion of the stucco design of the middle tower can be made out. Fig. 53 shows a simplified drawing of the mask portion of the figure. At either side of the decoration in the centre are three tall and narrow

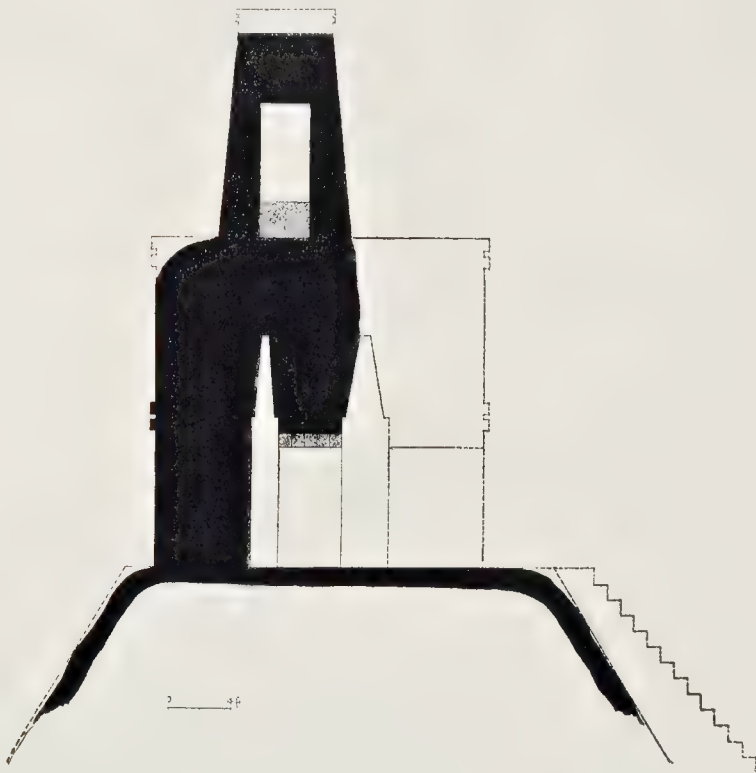


FIG. 52 — Temple A: cross-section showing room in tower and width of rooms.

openings passing completely through the roof-comb from front to back. One which was measured was  $9\frac{1}{2}$ " wide and 4' 1" high. Below these tall narrow openings and the mask decoration is a line of small square holes also running through the comb from front to back.

The lateral towers are of the same general plan as the middle one. The decoration upon these has completely disappeared. We found that these towers in addition to the openings from front to back contain interior chambers (Fig. 52) in the centre between the openings before described and behind the mask decoration. The tall and narrow openings in no way connect with the cham-

bers. Owing to the caving-in of the roof of the chamber of the southern tower, we were able to enter it.

On removing the debris we found a room with a flat stone roof (height 6' 3½", length [N. to S.] 5' 5¼", width [E. to W.] 3' 2"). There was no doorway of any kind. On the level with the floor were four small holes (4" × 4"), two on each side leading to the outside. These may have been for drainage. Two feet, four inches below the first floor was a second floor which showed a better plaster finish than the one above. Below the second floor rubble was found. An excavation in this revealed nothing and showed that there was no chance for a second chamber below the first. The walls of the room were unfinished.

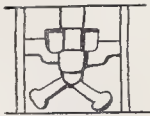


FIG. 53. — Temple A:  
mask design on front  
of middle tower.

The northern tower is in ruins, but the remains of the interior room were noted. The room in the centre superstructure is still intact. These interior rooms immediately suggest similar ones which we found in the massive roof-comb of Temple V at Tikal (Tozzer, 1910). The unfinished walls and the absence of an entrance in both cases suggest at once that they were built simply to economize weight and masonry.

It is interesting to note that the perforations at the sides of the tower at Nakum may be the first attempt at lightening the superstructure which leads later to the perforated roof-comb seen at the Usumacinta River sites and in Yucatan. The interior rooms may also have been a similar attempt which later developed into the low and narrow corridor-like opening seen between the two sloping and perforated walls of the roof-combs in other sites.

With the exception of the design on the front of the three towers, the walls of the building show no decoration other than the usual medial moulding and the cornice.

The interior plan (Fig. 50) shows two extremely narrow corridors, 50' 6" in length and ranging from 1' 5" to 1' 9" in width. They are connected by three doorways which probably correspond to the three entrances to the building. The front wall of the structure together with the outer spring of the vault has fallen. The picture of the building (Plate 40, 1) shows the back spring of the vaulting of the first room and the three doorways between the two corridors. Plate 39, 4 gives an idea of the width of the inner chamber. It is only with difficulty that a man can stand with his shoulders across the narrow room. Many small square openings appear in the back spring of the vaulting of the outer room (Fig. 51). Some of these were, no doubt, for cross-beams.

The massive character of the two piers between the three doorways is to be noted. They average about 9' 6" in width and 4' 1" in thickness. The weight of the three superstructures is probably responsible for this mass of masonry and the corresponding diminution of room space. Nowhere else except in the Tikal temples is the proportion of room space to wall space so small. It is difficult to suggest a use for the narrow inner corridor.

The method of bridging the three doorways is interesting. The middle door (6' 8½" in width) is spanned by five massive *sapote* beams. The two lateral doorways (10' 6" in width) have what may be truthfully called concrete arches. They are the first and only examples of the true arch which I have met with in Maya buildings. They are by no means uniform in their curve. The slope is

rather uneven, especially in the northern opening, as may be seen in the photograph (Plate 40, 1). As already pointed out, it does not seem possible to have built these without some form of temporary wooden support.

Running from either end of the massive piers between the doors to the back wall of the inner room are low and narrow walls of stone (1' 1" high and only 4"

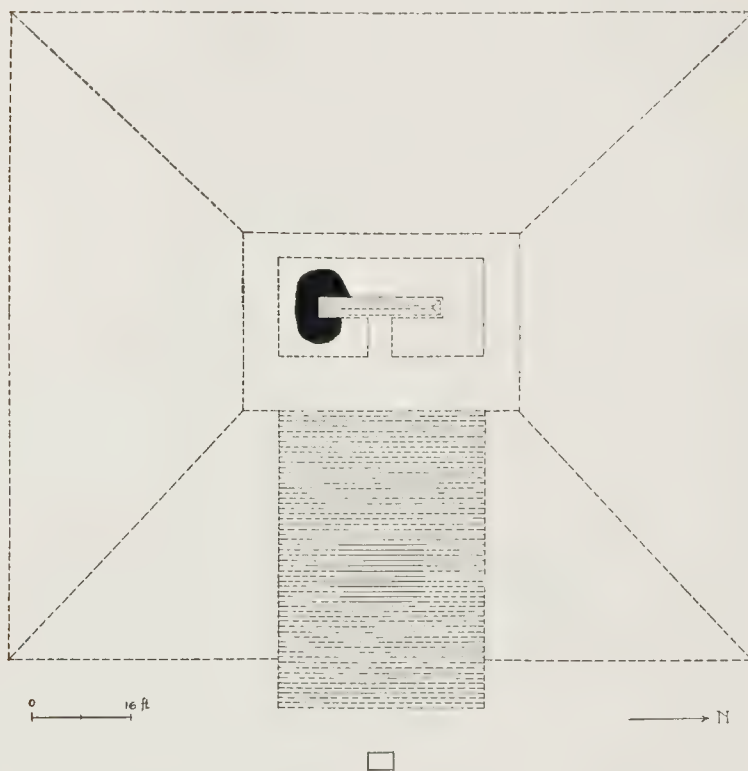


FIG. 54.— Temple C: plan.

thick). Between each pair of walls is débris. The plaster of the back wall of the room runs down below the top of these low walls. This might prevent the logical explanation, that these were the ends of benches built behind each of the two piers in the inner room.

On the floor of the outer corridor and in the southern doorway are remains of incised figures. One of these (Fig. 49, *e*) may have been used in connection with some game.

Mounds 3 and 4 are low structures attached in each case to the ends of the tall lateral mounds of Temple A.



**Mound 5** is at right angles to Mound 4, filling in the northeastern corner of the Great Plaza.

**Mound B** (Plate 37) occupies the centre of the long side of the Great Plaza. Panorama 1 (Plate 35, 1) was taken from the top of this elevation. It is one of the few high mounds which have no structure now standing upon them. The stairway was clearly on the southern side, and the building faced this direction. From the débris it evidently contained a single room. In front of the mound are the remains of three plain stelae with rounded tops and two altars also undecorated (Plate 41, 1). The stelae are all fallen, and parts of each are broken off. One of the altars is in fine preservation. Behind B is **Mound 6**, closely correlated with the main structure.

**Temple C** (Périgny's "Temple des Hiéroglyphes") (Plates 35, 1, 37, and 41, 2, and Fig. 54) forms a part of the western end of the Great Plaza. Owing to the mass of débris around the base of the mound it is impossible without excavation

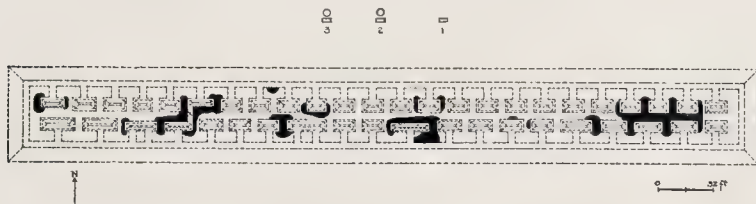


FIG. 55. — Structure D: plan and position of the three stelae and two altars.

to determine the character of the foundation structure. Remains of two terraces are noted on the southern side. The upper part of the foundation mound is almost perpendicular. The temple faces the east, and remains of eleven steps appear on this side. The building contains a single room. The relation of this temple to Structure B is shown in Panorama 4 (Plate 37).

In front of the stairway is the most interesting stela<sup>1</sup> at Nakum. There is no accompanying altar. The stone is still standing, although the upper left-hand corner is badly cracked. On the eastern side of the stela is practically the only inscription found, up to the present time, at this site (see p. 163). Remains of red paint appear on the carving. The stone leans to one side, but the line of glyphs is almost vertical, showing possibly that they were carved after the stone was in place and after it had assumed a leaning position.

The northwestern corner of the terrace of the Great Plaza is plainly marked to the north of Temple C. At this point the Northern Extension (p. 187) begins. Below the level of the terrace, which is about 5 feet high at this point, are several mounds. **Mounds 7 and 8** are parallel to each other, running north and south. Each probably contained three rooms. Périgny dug a trench through the first of these mounds. **Structure 9** runs east and west. It consisted of a single range of rooms with entrances on the north. These three mounds should probably be considered as correlated with Temple C, as Mound 6 is to Structure B. **Mound 10** is a small square structure to the southeast of 9.

The western side of the Great Plaza is completed with **Mound 11**. There

<sup>1</sup> Its dimensions are 10' 1" × 4' 2" × 2' 10".

is little remaining to show the arrangement and the number of rooms. To the southwest of 11 at the western end of D is a small elevation which has been called Mound 12.

**Structure D.** This remarkably long building forms the entire southern side of the Great Plaza. Panorama 1 (Plate 35, 1) from B shows clearly the range of this edifice. The plan (Fig. 55) gives a continuous structure. Périgny (1911, Fig. 2) divides it into four sections. Further investigation alone will show whether there are any breaks in the façade of this building. It stands on a terrace the corner of which is clearly made out at the western end.

This building was undoubtedly for residence. It is over 412 feet long, the eastern end being a little uncertain as regards the interior plan. It is two rooms in width and contains about 44 rooms. With few exceptions there is no connection between the two ranges of rooms, so that the building may be said to face both north and south. The stelae on the north and the Great Plaza on this side show that the principal façade faced in this direction. Several of the rooms in each range are not symmetrically placed in reference to those on the opposite side. The rooms vary in width from 4' 5" to 6'. Further excavation will undoubtedly require changes in the placing of the doorways. One connecting passage (marked X on Fig. 55) between the north and south sides is roofed with *sapote* beams. Several of the partitions between the rooms seem more in the nature of screen walls and were clearly built after the vaulting was completed. Incised drawings appear on the walls in several cases. The tenth room from the eastern end of the northern range shows an interesting form of cap stones in the vault (Fig. 56).



FIG. 56. — Structure D:  
vault in one of the  
rooms.

Three stelae and two altars<sup>1</sup> are found on the north of the building. Their position is shown in Fig. 55. Stelae D<sup>1</sup> and D<sup>3</sup> are plain. D<sup>2</sup>, which has fallen over on its altar, is badly broken. It once had a fine design with two lines of small hieroglyphics at the top. These have almost entirely disappeared. Plates 42 and 43, 1, give photographs of some of the broken pieces of this stela. Stela D<sup>1</sup> seems to have lacked an altar. Stelae D<sup>2</sup> and D<sup>3</sup> had plain altars before them.

#### COURT I.

This is bounded on the west by Temple E and Structure H, on the north by a portion of Structure D, on the east by Mounds 14 and 15, and on the south by Structure G.

**Temple E** (Périgny's "Castillo") (Plates 43, 2, and 44, 1, and Figs. 57 and 58) is the most important Structure facing Court I. It is a pyramid temple, and from the size of the foundation mound it may have been terraced, although this is not indicated either on the plan or section. The back and side walls of the building are very well preserved, as can be seen in Plate 43, 2. The two wing

<sup>1</sup> Stela D<sup>1</sup>, 10' × 5' 8" × 2'.  
D<sup>2</sup>, unmeasurable.  
D<sup>3</sup>, 7' 4" in height.  
Altar D<sup>2</sup>, 5' 4" in diameter.  
D<sup>3</sup>, 3' 6" " " 1' 3" thick.

sections suggest the lateral extensions of Temple N. These probably each contained a single room, although there is no trace of the inner walls of the room

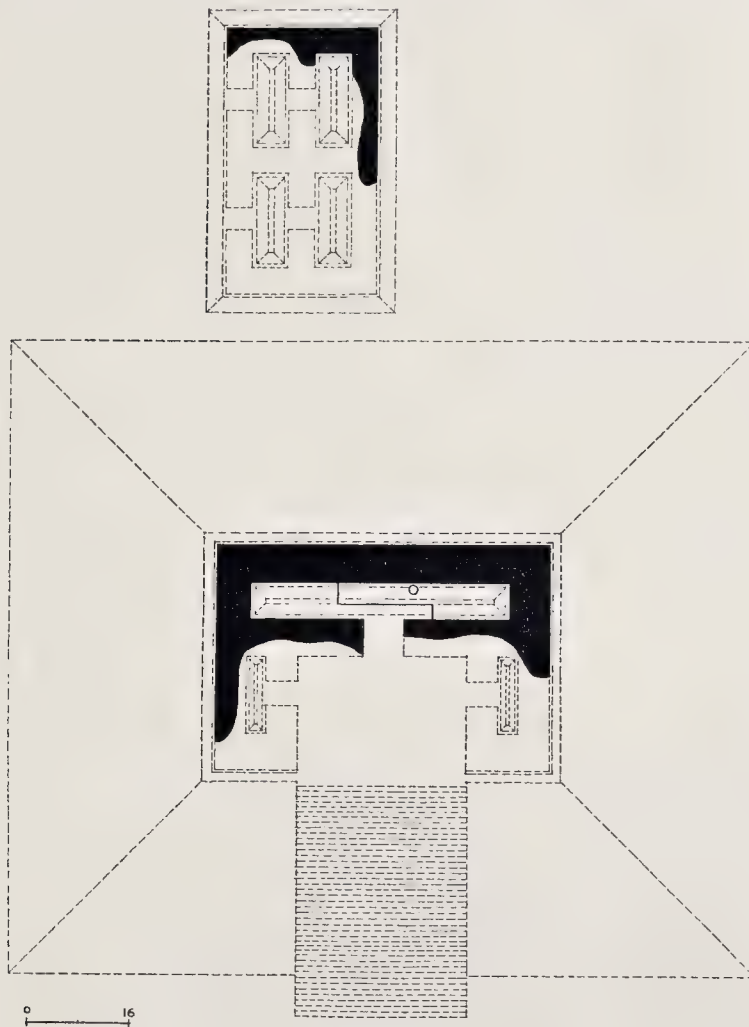


FIG. 57. — Structure F and Temple E: plan.

at the present time. These chambers are joined to the main structure and are not distinct buildings as in Temple N. The main edifice contains a single room (39' 2" × 5' 9") which is in a good stage of preservation. A fine example of a



bench, built of rubble, is found in this room (Plate 51, 4). It is 2' 4" in height and occupies the greater part of the back of the room and runs around the northern end. A basin-like depression (1' 5" in diameter and 7" deep), lined

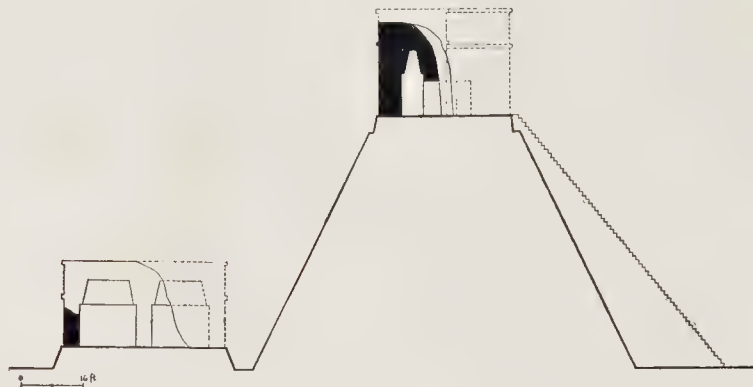


FIG. 58. — Structure F and Temple E: section.

with stucco, occurs in this bench. No remains of fire were found in this depression. Many interesting figures (Figs. 48 and 49), both incised and painted, were found on the walls of the room.

**Structure F** (Figs. 57 and 58), from the disposition of the débris, evidently contained four rooms arranged in two rows. It is a low building, evidently for residence, and runs almost up to the base of the foundation mound of Temple E. These two may, in fact, be correlated,

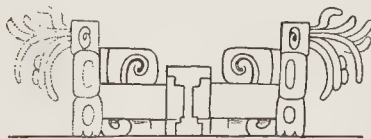


FIG. 59. — Structure F: mask on middle of northern façade.

the latter serving as a residence for the priests who presided over the adjoining temple. Fig. 58 shows this correlation. A portion of the northern façade is still intact, showing a plain wall with a single string-course above which appear the remains of mask figures. The one in the centre (Fig. 59) is fairly complete.

**Structure G.** The plan of G is fairly clear (Fig. 60). It is a building of the residential type, facing evidently both

north and south, with two longitudinal rooms and a transverse room at either end. Plate 47, 1, shows its relation to the Acropolis. The northeastern corner is still in position, and the southern wall still shows the remains of a mask (Plate 51, 1) as a decoration of the upper zone of the building.

The southeastern corner of Court I is occupied by **Mound 13**, which runs up to the base of the Acropolis. It is clearly only one range of rooms in width.

**Mounds 14 and 15** form the eastern side of Court I. The latter is a small pyramid, but no remains of a building were noted.

## COURT II.

Structure H (Fig. 61), forming the eastern side of this small plaza to the south of Structure E, is a curious mound, evidently two rooms in width on the

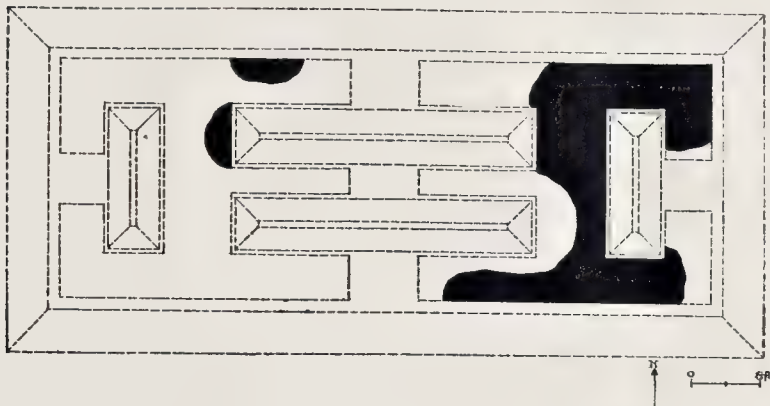


FIG. 60. — Structure G: plan.

north and a single room in width on the southern end, with entrances to the west on Court II.

Structure I (Fig. 62) occupies the southern and western sides of the same plaza. This residential building is curiously unsymmetrical, clearly showing additions and alterations. A definitive plan is impossible without extensive excavation. The one offered should be regarded purely as tentative. The southern wing, the southern wall of which is shown in Plate 43, 2, consists of two parts, one of three rooms and another to the west, of a single apartment. These all open upon the court to the north, and the eastern room also has a doorway in the end. The longer part is lower than the single-room addition, as may be seen in the drawing of a portion of the southern side of the building (Fig. 63). The outer walls have a rough batter and are plain up to the string-course. Above this there may, at one time, have been some form of decoration.

The western wing joins the part just described. The southern part of this range probably consisted of two rooms opening to the east. North of this two-room section the plan is most difficult to make out. A single room to the east is one unit, and a second is of three rooms.

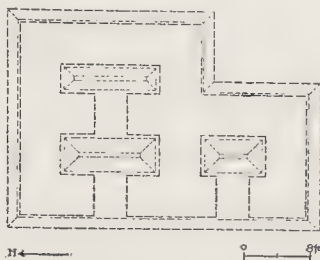


FIG. 61. — Structure H: plan.

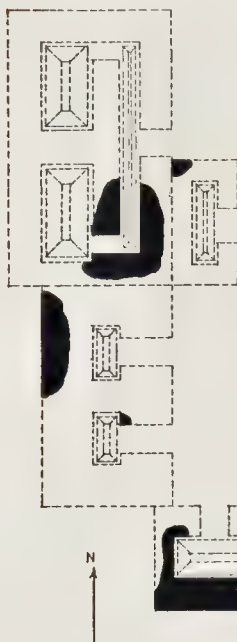
## COURT III.

Court III is directly to the south of Court II and is about the same size. The unbroken façade of Structure I forms the northern side.

Structure J, evidently a building containing a row of three rooms, faces the eastern end of the court.

Structure K, forming the southern side of the court, is a building similar in plan to J. It is difficult to make out the relation of these two buildings to the slope of the Acropolis. Their position therefore in relation to the mound of the Acropolis, as shown on the large map of the ruins (Plate 32), should be regarded as tentative.

Mound 16 forms the western side of Court III. It is nothing more than a mound of earth at the present time, with no indication of the number of rooms it formerly contained. Mound 17 is to the west of 16 and at a much lower level.



## COURT IV.

Court IV is the third of the small plazas to the west of the Acropolis. The mound of the Acropolis itself forms the eastern side of the court.



FIG. 62. — Structure I: plan.

Structure L is the building on the south. This is badly in ruins, but the remains of two ranges of four rooms each are made out. It is difficult to de-

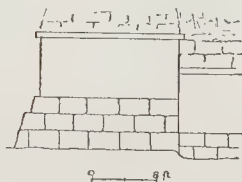


FIG. 63. — Structure I: elevation of a portion of southern façade.

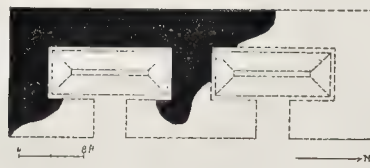


FIG. 64. — Structure M: plan.

termine which way the building faced. A well-preserved mask (Plate 51, 2) is found on the eastern end of the building.



Structure M (Fig. 64), on the western side of this court, is a small building with two rooms, one of which is in a good state of preservation. The ground to the west of M falls away rapidly to the river.

## COURT V.

Court V is formed by Structure L on the north, Temple N on the west, a portion of Structure O on the south, and the corner of the Acropolis mound on the east.

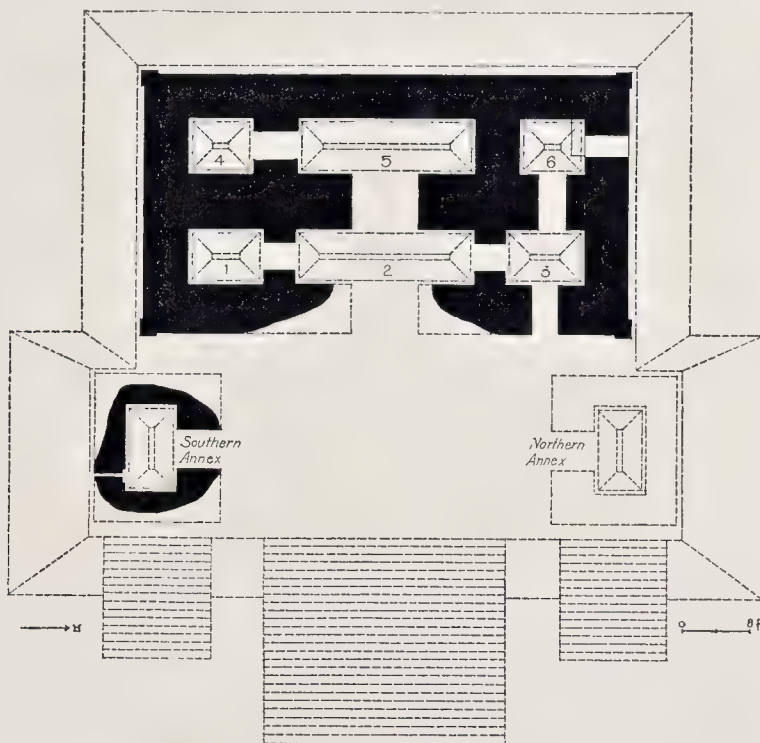


FIG. 65. — Temple N: plan.

Temple N (Périgny's "Edifice angle S. O.") (Plates 45 and 46 and Figs. 65 and 66) is the most important structure on Court V. Next to Temple A, it is the most interesting building at Nakum. It faces the east upon the great platform or terrace to the south of the Acropolis. The high mound on which it stands has almost perpendicular sides. Plate 46, 1, shows the appearance of the southwestern corner of this substructure.

The whole structure consists of a main temple of a single story, built on the top of the mound, and two lateral Annexes distinct from the central building

and each of two stories. The whole makes the most complicated edifice at Nakum. Fig. 66 gives a possible suggestion of the former elevation of the whole structure.

The main temple is the best preserved of any of the buildings at this site. The northern (Plate 46, 2), western, and southern walls are still intact, together with the greater portion of the roof of the building. The doorway alone has fallen owing to the decay of the wooden lintel. The arrangement of the façade is seen in Plate 46. The walls of the temple project slightly at the corners, as is shown in Fig. 65.

The building consists of six rooms. In addition to the main entrance in the middle of the eastern façade there is also a second doorway in the front of the building opening on rooms 3 and 6 to the north. This lateral entrance is rather an unusual feature in the Maya temples. There is no communication

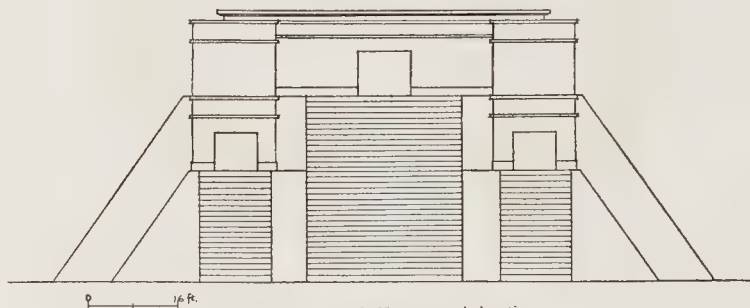


FIG. 66. — Temple N: suggested elevation.

between rooms 1 and 4 and 5 and 6. The wooden lintel in the doorway of the partition between rooms 2 and 3 is still in place. That between rooms 4 and 5 has disappeared (Plate 39, 3), but the concrete formation above has only partially fallen. The same is true of the wide lintel formerly spanning the doorway between rooms 2 and 5. Room 6 (10' 2"  $\times$  6' 6") has a circular window in the northern wall (Plate 46, 2), 2' 7" in diameter. Below the opening in the northwestern corner of the room is a bench with a sloping front.

The main temple is flanked on either side by an Annex, each of two stories in height, one room on each level. The lower chamber in each of these small buildings has an entrance from the front or eastern side of the mound (Fig. 66), which is reached by a short stairway. The upper chamber of each Annex is entered by a doorway opening upon the top of the mound on which the main building stands (Fig. 65). Plate 45, 1, shows the caved-in roof of the top story of the Southern Annex and the partially blocked-up entrances to the lower chambers in the front of the mound on either side. The outside wall of the top story of the lateral building on the south, together with its relation to the main temple, is shown in Plate 46, 1. These Annexes present several most interesting features.

The Upper Chamber (10' 6"  $\times$  6' 2") of the Southern Annex (Fig. 67) was fully excavated. The greater part of the vaulting on the four sides of the room,

together with the roof, has fallen in, but several details came to light in regard to the walls of the room (Fig. 68). The doorway is on the northern side, opening, as has been pointed out, on the top of the main mound. Two floors



FIG. 67. — Temple N: Southern Annex, upper chamber, plan.

were observed in this room, one 2' 6" below the other. The plaster of the walls is solid and unbroken down to the lower floor. In the southern wall (Fig. 68, *a*) is a cupboard-like depression near the spring of the vault (Plate 51, 5). In the

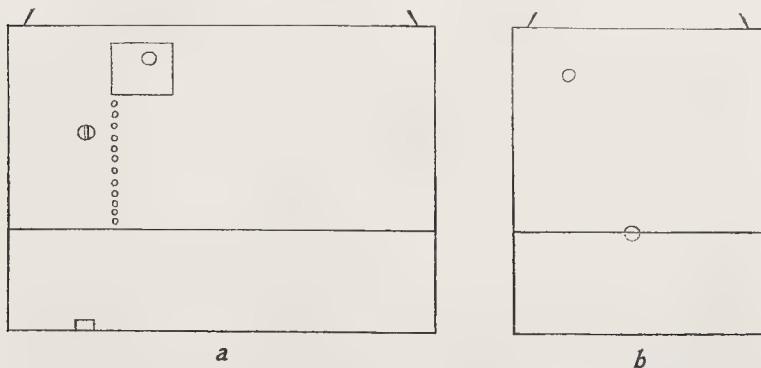


FIG. 68. — Temple N: Southern Annex, upper chamber. *a*, southern wall; *b*, eastern wall.

centre of this indentation is a small opening which communicates with the outside of the building. Below the left-hand corner of the cupboard there is a row of twelve small holes extending down to the upper of the two floors. In



the same wall is a fine example of the tie-hole (Plate 51, 3, and Fig. 69) through which runs a stick probably used for tying hangings. A game design (Fig. 49, *f*) appears on the upper of the two floors.

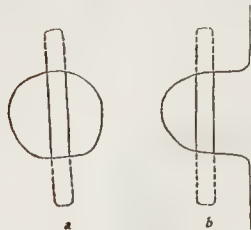


FIG. 69.—Temple N: Southern Annex, upper chamber. Tie-hole in southern wall. Scale  $\frac{1}{4}$ " = 1'.

**Southern Annex, Lower Chamber.** The doorway of this room is in the eastern wall and is well preserved. The vaulting runs north and south, while that in the chamber above runs east and west. There is little to add in regard to this chamber (10' 3"  $\times$  5' 11") other than to mention several painted designs noted on the walls (Fig. 49) which have already been discussed.

**Northern Annex, Upper Chamber.** The doorway is in the south, opening on the top of the main mound. The room is entirely in ruins.

**Northern Annex, Lower Chamber.** This room (11' 8"  $\times$  6' 4") faces east and has numerous incised drawings on the walls (Figs. 48, 49). It will be noted that the room is slightly larger than the corresponding lower chamber on the other side. It is difficult to determine the relation of the stairway to the top of the mound to those leading to the lower chambers of the two annexes.

In looking at the upper chambers of the two Annexes (Plate 45, 1) from the Acropolis mound a portion of smooth plaster flooring is noted on each side about two feet above the opening to the lower chambers. This appears owing to the fall of the outer facing of stone. This flooring is about on the level of the top of the main mound, and may show that the lower chambers were built first and the top of their roofs formed the top of the main mound. This point can be cleared up only with further excavation.

**Structure O** (Fig. 70) faces in part, at least, Court V. From a study of the debris and its relative height it appears to have had a small room at either end,

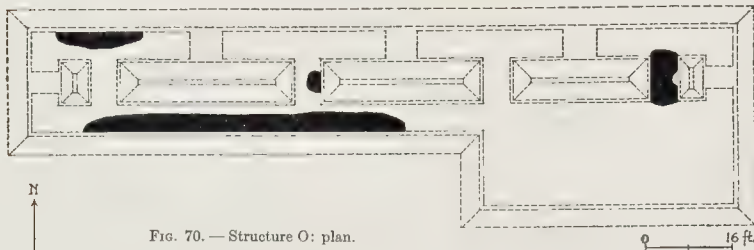


FIG. 70.—Structure O: plan.

entered from the end, with a single range of three long rooms between facing north. Plate 38, 1 and 3, shows portions of the southern wall of the building and gives a good idea of the veneer-like stone covering with the concrete beneath. The eastern third of the building widens out to the south. It is impossible to determine the interior plan of this extension. The line of the terrace on which the Acropolis stands begins to the east of O.

## GROUP VI.

To the south of Structure O are several mounds which I have grouped together. Few of them show any trace of stone buildings.

Mounds 18 and 19 are parallel and run east and west. To the south of 19

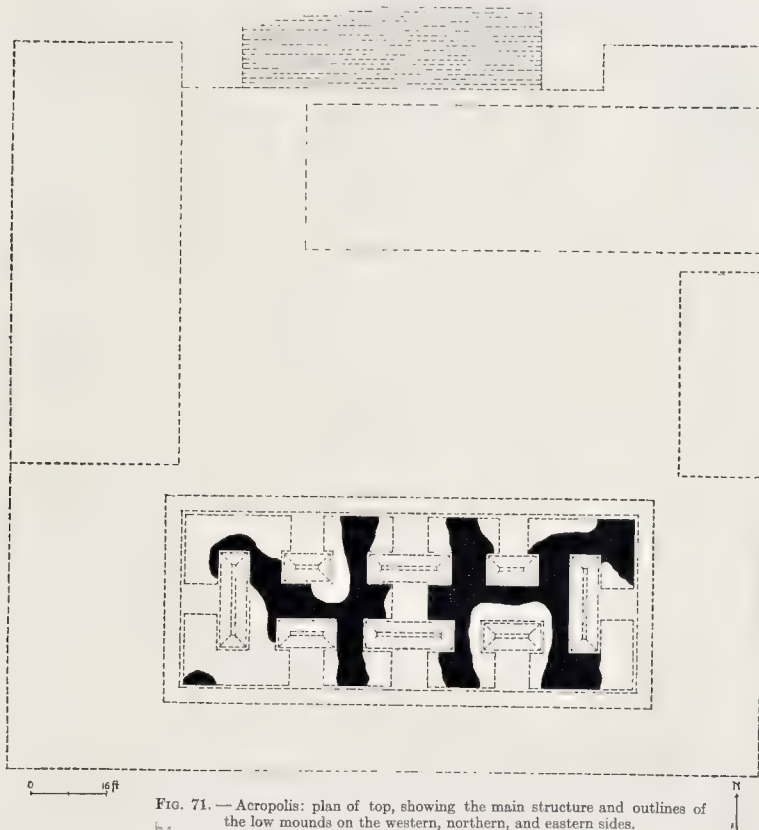


FIG. 71. — Acropolis: plan of top, showing the main structure and outlines of the low mounds on the western, northern, and eastern sides.

is Chultun No. 1. Mounds 20, 21, and 22 form a court. It was here that both Périgny and the Peabody Museum Expedition built their camp. The river is only a short distance to the south of Mound 21. Mound 23 is to the northeast of 22.

## THE ACROPOLIS.

The Acropolis (Périgny's "Édifice principal") is the most conspicuous feature of the ruins (Plate 47 and Fig. 71). The trees on top were almost the only ones left uncut by Périgny.

This immense mound appears symmetrical and as if it were entirely artificial. Owing to the enormous mass of felled trees at the bottom of the slope, fallen there from the sides of the mound, it was practically impossible to get measurements of the base and also most difficult to make out the exact position of several of the buildings at the foot of the slopes. The plan of the Acropolis in reference to these buildings is not accurate.

The mound was probably terraced, portions of the facings alone appearing on the eastern side. The stairway to the top has entirely disappeared, although excavation would no doubt reveal its presence. It has been indicated on the northern side of the mound, but it is difficult to understand its relation to Structure G.

On the eastern side, built against the face of this great artificial hill, are two tiers of rooms. Seven were counted in the lower range. These may be made out on Plate 47, 2, but their position in relation to the slope of the mound is so uncertain that they are not shown either on the plan of the mound or on that of the site (Plate 32).

The top of the Acropolis is roughly 135 feet from east to west and 156 feet from north to south. There seem to be projections of the northern side of the top at the corners, and the stairs may have been built between. Much remains of a structure on the southern side of the top (Plate 47, 1, and Fig. 71). It probably had a roof-comb. The plan shows a typical residential type of Maya building, two ranges of longitudinal rooms with a single transverse one on either end. It was possible to obtain accurate measurements of the six rooms of the sides and the two at the ends owing to the uncovered end walls of the rooms.

The top of the mound, with the exception of the building just described, is now practically level. Structures, however, formerly occupied the other three sides of the top, as traces of very low walls and slight depressions between are noted. These buildings were probably not of stone owing to the small mass of débris found in connection with them. It is suggested that the low walls show foundations for structures of wood. A single-room building is clearly noticeable on the eastern side. Owing to the very vague character of these walls it has been thought best to leave them out of the plan of the top and indicate only their outlines.

#### COURT VII.

**Structure P** (Fig. 72), forming the southern end of this court, is a building of two rooms, one behind the other. The greater part of the back and side walls is standing (Plates 38, 2, and 48, 1). It faces west on the terrace which runs to the south of the Acropolis. The southeastern corner of this terrace is shown in Plate 48, 1.

**Structure Q** (Fig. 73) is built on the eastern edge of the terrace, facing Court VII on the west. It is a building about 150 feet in length and probably consisted of a single range of six rooms. The exact size of four of these could be made out owing to the fact that the end walls of the rooms are uncovered. The lintels were, as in many other cases, of wood, and consequently the front of the building is in almost complete ruin while the back wall is well preserved (Plate 38, 4).



**Mound 24**, just to the west of the northern end of Q, was evidently a building of one room. **Mound 25**, forming part of the northern side of Court VII, still has a portion of the southern wall in place. From the size of the mound it is evident that it had two ranges of rooms, possibly three rooms in each line. From the wall on the southern side it is evident that the building faced Court IX to the north. It is difficult to determine the relation of this mound to the slope of the Acropolis. The western wall is still in place, and it seems to come inside the line made by the base of the Acropolis mound. This does not appear on the map. Further investigation may serve to show that the rooms on the eastern



FIG. 72. — Structure P: plan.

face of the Acropolis are built out from the main mass of the mound and thus project to the east further than the line made by the western end of Mound 25.

**Mounds 26 and 27** lie to the east of that just described. Both are single-roomed structures. The first evidently faces north and the second south. It is impossible to ascribe a reason for the occurrence of these one-roomed buildings.

The Acropolis forms the western side of Court VII.

#### GROUP VIII.

There is an interesting group of mounds to the east of Structure Q which I have classed together as Group VIII.

**Mounds 28 and 29** are the southern members of the group. They are low and evidently the foundations of buildings of wood.

**Mounds 30, 31, and 32** form three sides of a slight elevation which shows the remains of the terrace on the eastern side. The court made by these mounds

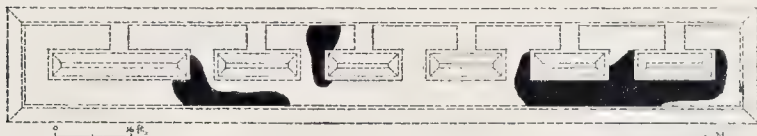


FIG. 73. — Structure Q: plan.

shelters **Chultun No. 2** (Fig. 99 and p. 192). These mounds are also low and are evidently not the remains of stone structures.

**Mound 33** is much higher than those just mentioned and probably contained two ranges of about five rooms each. This building seems to have faced the north. It is not difficult to distinguish the mounds, such as 30, 31, and 32, which are clearly the foundations only of buildings and those, like 33, which are clearly the remains of the fallen buildings themselves. It is worthy of note that all the low mounds are on the outskirts of the city, usually behind much larger structures. The question of wooden buildings has never been satisfactorily

answered. Extensive excavation is needed throughout the Maya area in regard to this point. There seems to be little doubt that wooden buildings were not at all uncommon in the vicinity of the large stone structures. Many of the stairways were undoubtedly of wood, especially those belonging to the residential type of buildings. It is always difficult in archaeological work to

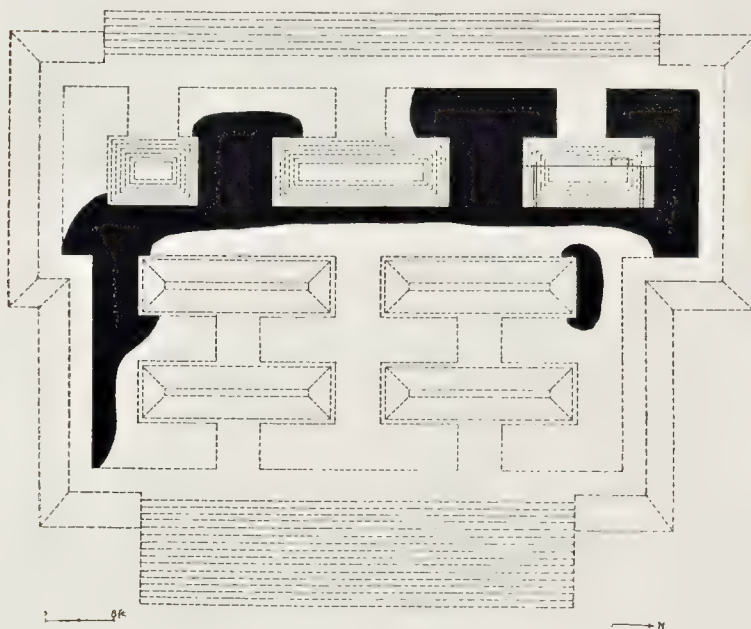


FIG. 74. --- Structure R: plan

estimate properly the place taken and the part played by buildings and objects of a perishable nature.

#### COURT IX.

**Structure R** (Figs. 74 and 75) is by far the most important edifice on Court IX, standing on the eastern side. It is evidently a building of the second type and really consists of two parts, a single range of three rooms facing west on Court IX and a later and lower addition, probably of four rooms, facing east at the southwestern corner of Court XI. The main part of the building is in a fairly good state of preservation as regards the walls of the rooms.

The northern end of the western range shows a plain wall, a string-course, and an upper decorated zone, a part of which can still be made out (Plate 48, 2). A seated figure is offering something in his hands. The end portion of a mask is suggested at the back of the figure (Fig. 76). The northern room of the main range was excavated. A fine example of a five-stepped vault is seen here (Plates

39, 2, and 48, 2, and Fig. 77), and, in fact, the same method of vaulting is noted in all the rooms of this line. Several pairs of transverse post-holes appear in this vaulting. It is to be observed that the door is not in the centre of the side of this northern room. Across the eastern side there is a bench (2' in height) with

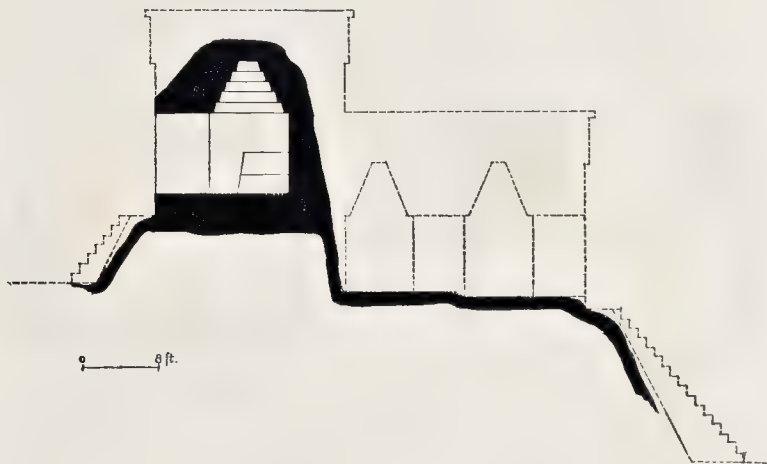


FIG. 75. — Structure R: cross-section, showing northern rooms.

armpieces at either end (Fig. 77, *a*, *c*, and *d*). A step is found before this bench. In the northern end of the room is a circular depression (5" deep, 10" in diameter) in which remains of charcoal were found. The wall above the hole in the floor shows signs of smoke. Stretching across this wall is a horizontal line of small shallow holes similar to those in the upper chamber of the Southern Annex of Temple N. Remains of burnt wood and a few sherds were found in the southern end of this room.

This main range on the east is clearly the original part of the building. An addition was made, as has been noted, to the east, shorter and lower than the first construction. The difference in the level of Courts IX and XI is clearly shown in Fig. 75. The southern wall of this addition is still in place, but it is difficult to make out the exact plan of the rooms. Part of the end walls of two rooms appear, but the easternmost rooms are in complete ruin. There is no communication between the two parts of the building.

Structure S occupies a part of the northern side of Court IX. The plan (Fig. 78) is most difficult to make out. There is clearly only one range of rooms, either two or three in number. A small portion of a mask design (Fig. 79) is still to be noted on the northern façade.

Mound 13 forms the western side of this court. This has already been described (p. 172), as have Mounds 25, 26, and 27, which form the southern side.

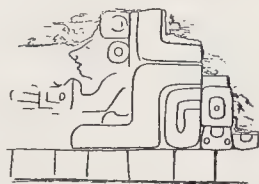


FIG. 76. — Structure R: portion of design on northern façade.



## COURT X.

Directly to the north of Court IX is Court X, Structure S forming the southern side, with Mounds 14 and 15 on the west. The eastern end of Structure D is on the north.

Structure T is the only building remaining to be described. This is clearly two ranges in width with possibly three rooms in each range. The northern

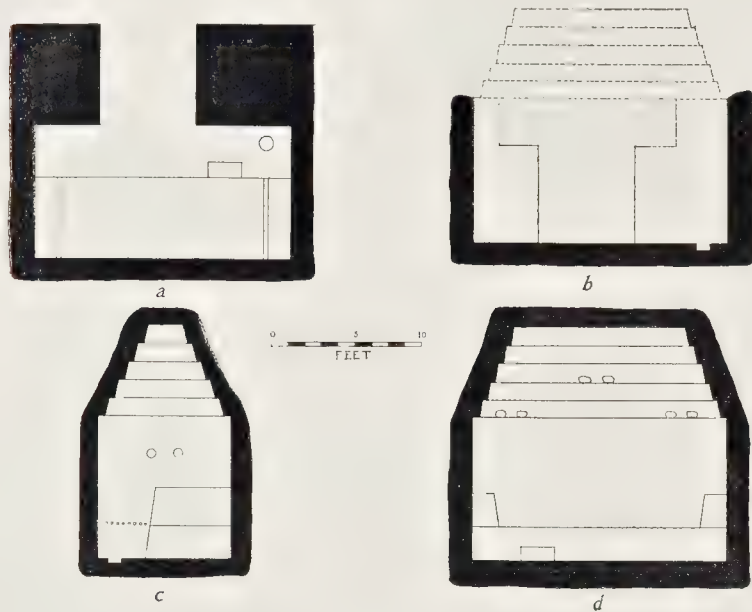


FIG. 77. — Structure R: details of northern room of western range. *a*, plan; *b*, western wall; *c*, northern end; *d*, eastern wall.

wall alone remains standing. It is difficult to determine whether this edifice faced Court X on the west or Court XI on the east.

## COURT XI.

The large plaza to the east of Courts IX and X has been called Court XI. As will be noted in the cross-section (Plate 34), it is on a lower level than the two preceding courts.

Temple U (Périgny's "Temple du Roi") (Plates 49, 1, and 50, 1, and Fig. 80), on the east, is by far the most important building on this plaza. It is a temple on a high mound, the supporting structure being more like the usual Maya substructure than the foundation mounds of Temples C and V. Remains of terracing are clearly to be made out on the northern side. The building faces the

west. The front has fallen, but the back spring of the vault is still in place (Plate 49, 1). Part of the northern retaining wall of the stairway is well preserved.

The plan of the temple (Fig. 80) is exactly similar to that of C and V, containing a single room.

The wall at the back has a slight projection, suggesting a similar feature in all the Tikal temples. There are no niches at the sides of the building, however, as at Tikal.

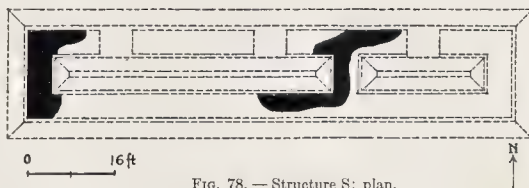


FIG. 78. — Structure S: plan.

The stela<sup>1</sup> in front of the stairway is the only one in the main group which is found outside the Great Plaza. The face of this monument was at one time finely carved (Plate 52, 2) with a single standing figure wearing a feather headdress. An interesting feature of this stela is the curious groove, averaging 4' 9" from the bottom, running unevenly around the three plain sides of the stone. This groove reduces the thickness of the stone to 1' 11".

Mound 33 forms the southern side of Court XI and, as I have already noted, probably faced this court. Structures R, S, and T are on the western side. Two of the ranges of rooms in R (Fig. 75) undoubtedly face this court, and the rooms in T may also open to the east.

Mounds 34 and 35 (Plate 49, 1) form the northern side of Court XI. The first probably contained three rooms in line. The plan of the second can be made out only by excavation.

#### GROUP XII.

East of Temple U are a large number of mounds which have been called Group XII. They may clearly be correlated with the neighboring structure, indicating the residences of the priests who worship in this temple. These structures cannot all be considered in the same class, as their heights differ.



FIG. 79. — Structure S: portion of mask design on northern façade.

Mound 36 is to the southeast of Temple U. It is very low and probably never had a stone building on top. Mound 37 joins the substructure of the temple and is much higher than 36 and may show the remains of a stone building.

Mounds 38, 39, 40, and 41 are about the same height as 36. Mound 42 is much higher and should be classed with 37. Mounds 43 and 44 are hardly perceptible, rising only about 1' 6" from the general level of the ground.

<sup>1</sup> Dimensions: 13' 9" × 4' 9" × 2' 9".

## COURT XIII.

Directly to the north of Court XII and slightly larger is Court XIII. These two quadrangles rank next to the Great Plaza in point of size. Panorama 2 (Plate 35, 2) shows the limits of Court XIII.

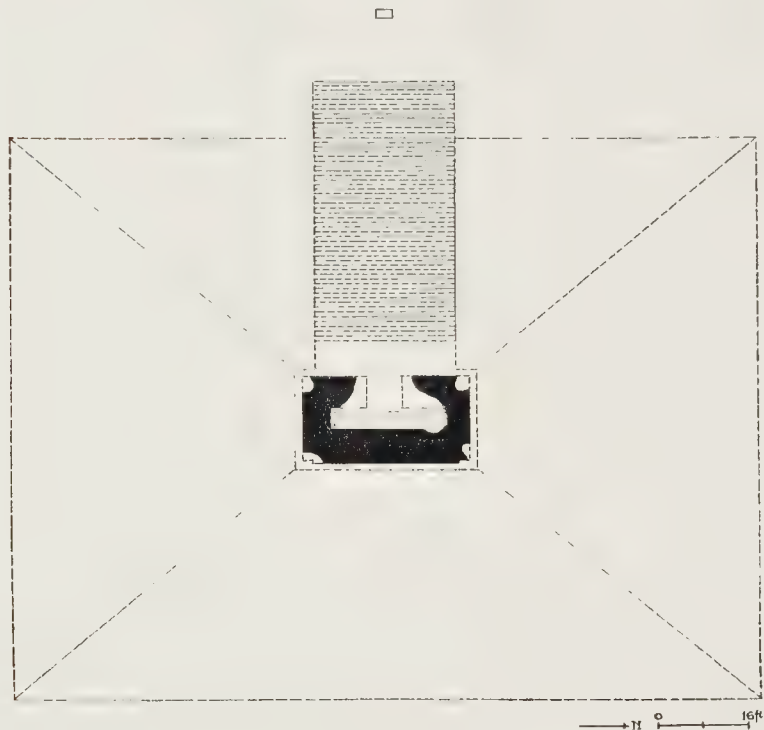


FIG. 80. — Temple U: plan, showing single stela.

**Temple V** (Périgny's "Petit Temple") (Plates 49, 2, and 50, 2, and Fig. 81), on the eastern side, is the most important structure facing this court. It is clearly of the temple type and is typical of several of the Nakum buildings in that the mound on which the structure stands has almost vertical sides rather than the sloping pyramid form so usually associated with the Maya temples. The back view of this building (Plate 50, 2) shows the perpendicular mound. The temple also has only a single room and is in no way remarkable. It is almost exactly similar in plan to Temples C and U. The front is entirely gone, and the back wall is cracked from top to bottom, possibly by an earthquake. Numerous small holes were observed through this back wall.

At either corner of the western side of the foundation mound is a lower mound



symmetrically placed in reference to the main structure. No remains were noted on these lateral mounds. These have been called **Mounds 45 and 46**. They may have served as foundations for buildings similar in purpose to the lateral chambers in Temple E and the Annexes of Temple N.

Mounds 34 and 35 occupy the southern side of Court XIII. The back of Temple A (Plate 40, 2) forms the entire western side of the court. The northern side of this court has no buildings. It is the only one of the large plazas which

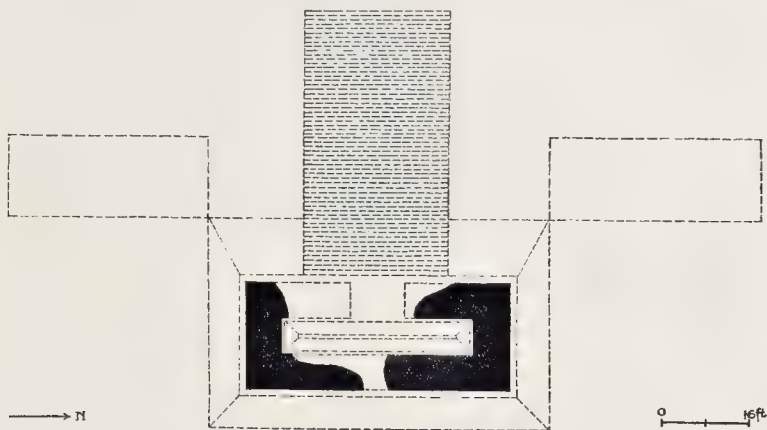


FIG. 81. — Temple V: plan.

is not bounded on all four sides by buildings. Panorama 3 (Plate 36), looking west from E, gives a good idea of the heights of Temples U and V.

#### GROUP XIV.

There finally remains of the city proper to be mentioned a small group of mounds some distance to the northeast of Temple V. **Mounds 47 and 48** are low and unimportant. **Chultun No. 3** (Fig. 100) is to the southeast of 48.

#### NORTHERN EXTENSION.

It is possible to draw an analogy between the Northern Suburb at Tikal and the Northern Extension at Nakum. In the former site there is no physical connection between the main group and the northern outpost, whereas at Nakum the buildings and mounds at the north of the city are connected with the main group by two parallel lines of low mounds.

The plan given of this Extension (Plate 33) should be regarded as in every way tentative. There are several points which will need clearing up, and many details will doubtless have to be changed on further investigation.

The beginning of the Extension stretching to the north is at the corner of

the terrace to the north of Temple C, at the northwestern corner of the Great Plaza. From the northern side of this temple to the northern side of the mound on which Structure W stands it is about 2,000 feet. For the first 950 feet the

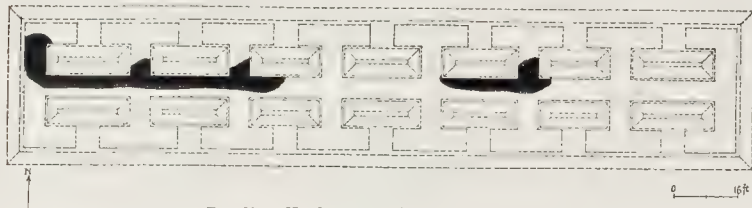


FIG. 82. — Northern Extension, Structure W: plan.

distance between the wall mounds is about 75 feet. This Extension may be considered in the nature of a raised road, as the ground falls away on both sides.

About 800 feet from the southern end of the eastern line of mounds a large platform is reached which supports several low mounds, probably the foundation of wooden structures. To the north of this are two mounds at right angles, in the corner of which is a *chultun*. The line continues about 160 feet to the remains of a pyramidal temple structure which is entirely in ruins. In front of the stairway on the west of the pyramid is a single undecorated stela with its altar, also plain. The only unusual feature is the fact of the stela standing beside rather than behind the altar. The line continues about 325 feet beyond, almost reaching the large platform to the north. These mounds are higher than those to the south of the pyramid temple and are evidently the remains of stone buildings.

The western line of mounds is more broken and uneven than that to the east. Both continue parallel for about 1,050 feet, where the western line ends after widening out into a platform. To the west a group of low mounds arranged

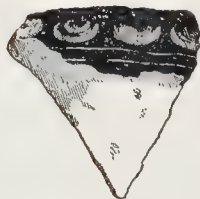


FIG. 83. — Chultun 2: Pottery fragment overlaid with black plaster.  $\frac{1}{2}$ .



FIG. 84. — Chultun 2: Fragment of pottery vessel.  $\frac{1}{2}$ .



FIG. 85. — Chultun 2: Pottery vessel.  $\frac{1}{2}$ .

in a court is made out, and a long and a short mound connect this with the northern platform. This northern elevation which closes the end of the Extension is roughly 250 feet square. Near the northern edge is a low mound running north and south.

**Structure W** (Fig. 82) is located on the southern side of this elevation. This building contains fourteen rooms arranged in two rows of seven each. Several of the back walls of the northern range can still be made out. With the exception of Structure D it is the largest building of the residential type found at this site.

It is impossible to determine the purpose of this long Northern Extension. It is easy to say it was for guarding the city. Several early writers have laid stress upon the idea of defence in the construction of the Maya cities. With the exception of a few sites in southern Guatemala there is little evidence to show that any means were taken by the Maya architects to ward off the attack of hostile forces.

#### MINOR ANTIQUITIES.

In pursuance of the policy of the Museum which I have mentioned, it was deemed better to confine our operations to a general investigation of the ruins as they now appear rather than to undertake any excavation.

The northern room in Structure R was cleared, and a few sherds were found near the level of the floor. Sherds were also found in clearing the single room in Temple E.

*Chultun 2* in Group VIII was dug out down to the smooth plaster of the floor, and it yielded a small but interesting collection of objects. Potsherds

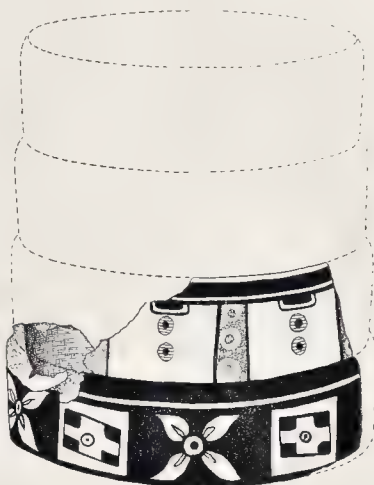


FIG. 86. — *Chultun 2*: Portion of pottery vessel with suggested restoration.  $\frac{1}{4}$ .



FIG. 87. — *Chultun 2*: Fragment of modelled ware.  $\frac{1}{4}$ .



FIG. 88. — *Chultun 2*: Fragment of modelled ware.  $\frac{1}{4}$ .

illustrating practically all the forms of pottery decoration met with in the Maya area were found, including plain, incised, painted, and modelled ware.

A single small sherd (Fig. 83) shows a thick layer of black plaster with incised design overlaying the pottery base.



Figs. 84 and 85 show a common shape of bowls found in *Chultun 2*. Fig. 85 gives an idea of a form of decoration noted on several sherds. The restoration of the jar shown in Fig. 86 is justified by the fact that sherds were found with this terrace-like form.



FIG. 89. — *Chultun 2*: Figurine of seated female. }

Two pieces of pottery should be especially mentioned, both fine examples of modelled ware. Fig. 87 shows an elaborate feather design and the head of a figure suggesting the Long Nose God. Fig. 88 is a human face in profile with feather headdress and a necklace. Maler found a few sherds of a similar ware at Yaxchilan.

Several figurines representing a seated female figure with one arm lying in the lap and the other across the breasts (Figs. 89 91) suggest similar forms from some mounds at



FIG. 90. — *Chultun 2*: Figurine of seated female. }

Kamela, high up on the Salinas River. A standing figure (Fig. 92) with curiously thick lips and hands clasped in front of the body is also similar to a form found at Kamela. This is in the form of a whistle. Another whistle (Fig. 93) represents an owl.

The head of a delightful old woman with her hair parted in the middle, with wrinkled brows and cheeks and sunken jaws, is shown in Fig. 94. A portion of a second head (Fig. 95) exactly similar to the first and evidently from the same mould was also found in the same *chultun*. This has a perforation at the top which was evidently broken off on the first head.

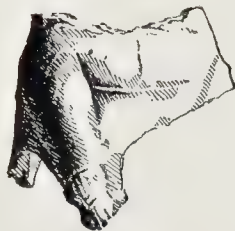


FIG. 91. — *Chultun 2*: Portion of female figurine. }

Fig. 96 cannot be explained. It formerly consisted of two standing figures. A circular opening with a finished rim is at the side near the bottom.

In addition to these objects which have been mentioned, *Chultun 2* yielded several spear

points and a crude mould for a figurine. A few pieces of pottery were found near the base of Stelae C and N.<sup>2</sup>

#### CHULTUNES.

The word *chultun* was used by Mr. Edward H. Thompson in his paper, "The Chultunes of Labna" (1897). It is a Maya word, meaning an excavation or a cistern in stone, from *tšul*, to clean, and *tun*, stone. Perhaps the best definition of a *chultun* is "a more or less circular subterranean cistern-like reservoir."

The *chultun* is a direct result of the stony character of the country, where a comparatively slight deposit of soil overlies a continuous bed of limestone.



FIG. 92. — *Chultun 2*: Pottery whistle of human figure. }

Practically anywhere in the northern and central part of the Maya area the stone may be reached at no great depth. It is not difficult to excavate these cisterns out of the comparatively soft limestone. Few have been previously reported outside the northern part of Yucatan, and, as far as I know, none has been described. In Yucatan they seem to have a close connection with the water supply.

*Chultunes* are very common in the Peten area. Thirty-nine of these underground chambers are shown on the map (Plate 31) exclusive of those found in connection with the large groups of ruins. The distribution of mounds and *chultunes* is unequal in the various sections of the region. Yaloch, near the site of Holmul and Seibal 2d, seems to be a centre. La Honradez, with the large number of small mounds stretching along the trail to the north, is another centre. A third is near Nakum, and a fourth near Tikal. There seems therefore to be some correlation between the ruins of major importance in this area and the distribution of *chultunes* and mounds of minor importance.

The correlation of *chultun* and single mound along the trails is to be noted. It might be supposed that here we have the remains of a structure and the source of its water supply in the subterranean chamber. This correlation exists, however, quite as often near the natural water-holes or small streams as at some distance from a natural water supply.



FIG. 94. — *Chultun* 2: Head of old woman.  $\frac{1}{2}$ .

In addition to the *chultunes* stretching in long lines from city to city, one or more were noted in close proximity to most of the important sites, — eight at Holmul, four at Nakum, three at Tikal, and one at La Honradez. There seems to be no distinction in construction or in function between those found at some distance from the large ruined groups and those occurring within the confines of a large site.

There is evidently no close connection, as in Yucatan, between the water supply and these underground rooms. In fact, they are frequently found near sites where there is an abundant supply of water throughout the year. In almost no case do we find any drainage into them. They are usually found on ground slightly higher than that of the surrounding country. In this respect they differ from those in Yucatan.

Another point against their use as storage for water is shown in the fact that in several the rock from which they are excavated is porous and the walls do not seem in all cases to have been covered with an impervious layer of plaster. That they were used in some cases for the storage of maize and other foods is possible, as they are generally dry and would be suitable for such a purpose. That some were used for burial places is very probable.

The *chultunes* of this area fall naturally into two types. The first is the

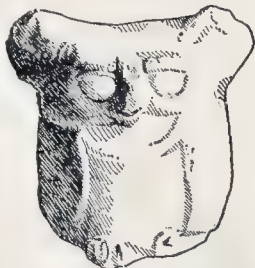


FIG. 93. — *Chultun* 2: Owl whistle.  $\frac{1}{2}$ .



FIG. 95. — *Chultun* 2: Portion of head of old woman.  $\frac{1}{2}$ .

cistern-like reservoir similar to the second type in Yucatan (Fig. 97), a chamber or well dug out of the limestone with wall and roof of the natural stone but with



FIG. 96. — *Chultun 2*: Pottery figure with round opening near bottom.  $\frac{1}{2}$ .

no trace of walls or vault of worked stone. Good examples of this class are *Chultunes* 1 and 2 at Nakum. The second type is far more common in the Peten area, the lateral-chambered *chultun*. Here, in addition to the shaft-like well, is a chamber opening from the bottom of the shaft (Fig. 98). This may be said to be the typical northern Guatemalan type.

It is not intended at this time to treat exhaustively the *chultunes* of the Peten district, but mention should be made of one of the three reservoirs examined at Yaloch (Fig. 98), a few miles from the ruins of Holmul. A remarkable collection of pottery was taken from this chambered *chultun* by Dr. Davis of Belize and presented by

him to the Museum at Bristol, England. The Peabody Museum Expedition went to the bottom of this chamber and unearthed a number of most interesting pieces of pottery. Two tall jars were found with no bottoms, the edges at the base showing that they were made purposely in this way. There were evidences that the chamber had been used as a burial place. An altar-like niche opening from the northern side of the chamber may have been used for offerings. The three *chultunes* excavated at Nakum are all made in the solid limestone with no trace of artificial walls.

*Chultun 1* is found in Group VI. It is a cistern type with no lateral chamber. The entrance is 1' 4" in diameter, its greatest width 4' 11", and its depth 7' 3". Very few pottery fragments were noted in the earth dug from this well.

*Chultun 2* (Fig. 99) is located in Group VIII. A large flat stone, evidently a piece of the cover, was found in excavating this subterranean chamber. This *chultun* has a circular opening 1' 6" in diameter and widens out as you go down. At the bottom the diameter is 5' 11". It is 6' 6" deep from the top of the stratum of limestone to the floor of the well. Excavation in this chamber brought to light an interesting collection of objects. These have already been described (p. 189). Crude pottery fragments were found throughout the mass of earth which filled the *chultun*. Practically all the objects of interest were encountered in the last eight inches of earth.

*Chultun 3* (Fig. 100), in Group XIV, is the only one noted at Nakum with any trace of lateral chambers. The subterranean room seems to have been only partially artificial. A cave-like opening in the limestone was probably enlarged.



FIG. 97. — Labna, Yucatan: Section of *Chultun*. Type 2.



The two side chambers in this *chultun* are irregular in outline. Nothing of importance was found here.

From the fact that *Chultun* 2 was relatively so rich in specimens and Nos. 1 and 3 yielded nothing, it seems clear that we cannot say that the burial of objects

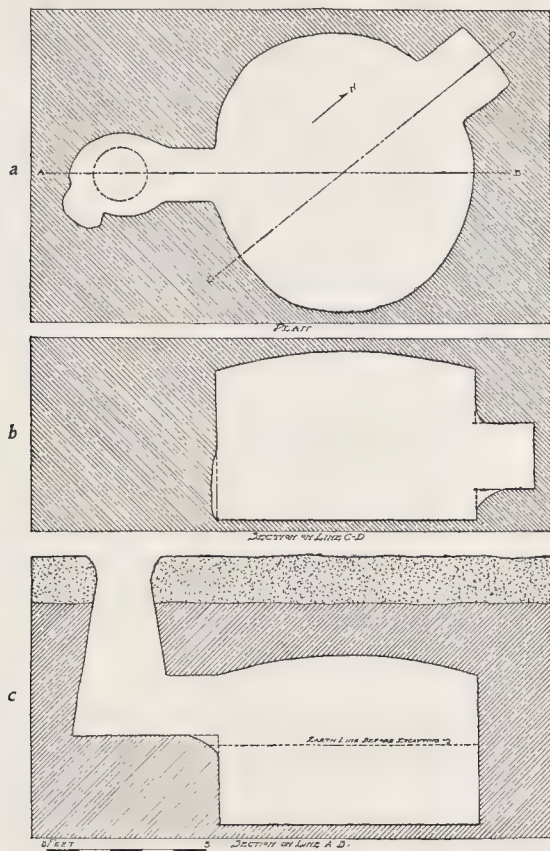


FIG. 98. — Yaloch, British Honduras: *Chultun* 1, lateral chambered type.

was common in these underground chambers. *Chultun* 1 of Yaloch, which contained so rich a collection of pottery, seems to be another exception to the rule that the *chultunes* should be regarded primarily as storage places and not as places of burial.

A single *chultun* was noted in the Northern Extension, and Mr. Merwin found a group of three *chultunes* at El Encanto. None of these was explored.

## RUINS OF EL ENCANTO.

The description of the ruins of El Encanto, about sixteen miles northwest of Nakum, may well appear in the report on the larger group. I am indebted for the following details to Mr. Merwin, who visited this site in 1910-1911. The principal group of structures consists of the truncated pyramidal mound (Fig. 101) upon which are the remains of a small building with two rooms. Built against the western slope of the pyramid is a second, formerly, no doubt, the substructure of the building.

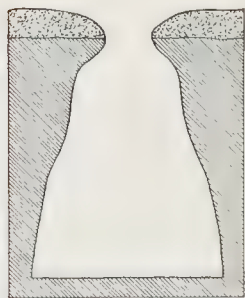


FIG. 99. — Nakum: *Chultun* 2, section, cistern type.

The principal feature of interest of this site is a stela (4' 4"  $\times$  1' 8"  $\times$  9 1/2"), already mentioned (p. 163), standing about 12 feet in front of the pyramid. It has been badly injured probably by *chicleros* in addition to weathering. The front once had a sculptured design. The legs of a human figure together with the mask panel on which he stands can with difficulty be made out. There are the remains of a hieroglyphic inscription on either side. That on the south consisted of 14 double glyphs which are almost entirely obliterated. The inscription on the northern side (Plate 53) is a little clearer, but a study of the glyphs is disappointing. It is clearly not an initial series.

The stela stands on a terrace (200'  $\times$  95') which runs along the western side of the main mound. It is covered with a flooring of plaster. Near the northwestern and southwestern corners of this terrace is a small mound, probably the foundation for a wooden building. To the north of the large pyramid is a second structure with no remains at the present time of a building on top.

To the east of the main pyramid is a group of three *chultunes*.

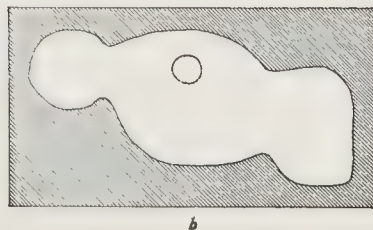
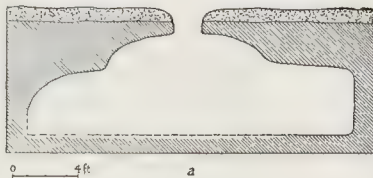


FIG. 100. — Nakum: *Chultun* 3, lateral chambered type.

## TIME CONSIDERATIONS.

The only secure basis for a consideration of Maya chronology is the study of the dates appearing upon the hieroglyphic inscriptions. As these are absent at Nakum, it is difficult to treat properly the relative age of these ruins compared, first, with those of the same area and, secondly, with those in other parts of the Maya region. It is dangerous to lay too much stress upon chronology based mainly upon a study of the art and architecture. Dr. Spinden (1912) has been very successful in this

respect in his study of the chronological development of the Copan stelae. It is a far more difficult problem when the same method is applied to the development of various details of plan and of decoration in the Maya area as a whole. As it is often impossible to determine whether the trend in decoration is from realism to conventionalism or from conventionalism to realism, so it is often

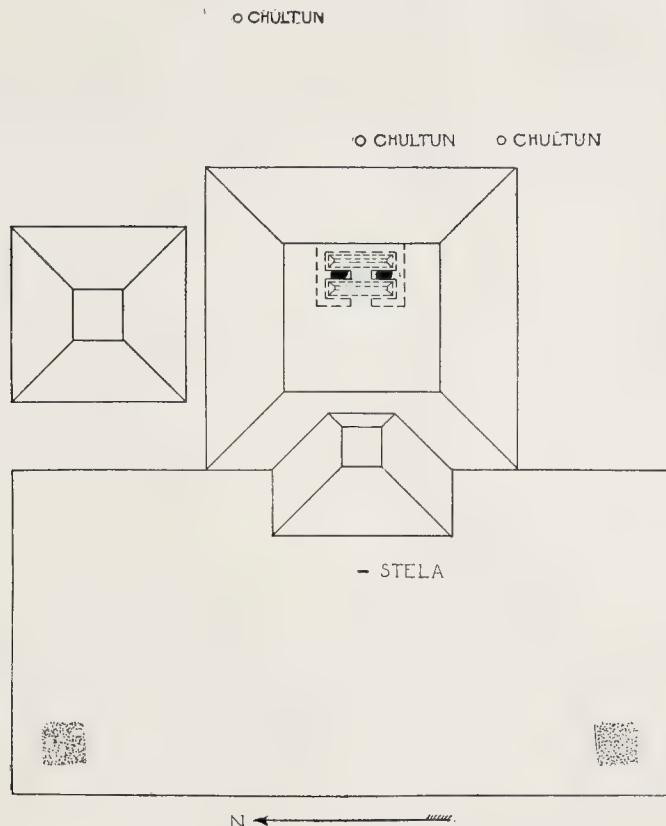


FIG. 101. — Ruins of El Encanto: plan.

impossible to determine whether an advance in ideas of construction from our point of view corresponds to a similar advance in point of time. I have used this questionable method in my discussion of the development of the roof-comb (p. 157). Here we have some help from the study of the dates of the inscriptions. Chichen Itza with its light lattice-like roof-comb we know to be later than Palenque with its double-walled comb, and Palenque in turn later than Tikal with its massive superstructure.

From a study of the dates alone, Tikal is given the first place in point of



time in the Maya cities, and I have already expressed an opinion that the Peten area in which both Tikal and Nakum are located is the oldest seat of the Maya culture yet found. But various considerations, perhaps I should say feelings, in the mind of the explorer who has visited both Tikal and Nakum tend to place Nakum later than Tikal. The student of Classical Archaeology, with his system of interlocking dates and his literature, scoffs at the vagueness as regards the dating in American Archaeology. There is good reason to hope, however, that with the further elucidation of the Maya hieroglyphic writing and the study of successive strata like that now being undertaken in the Valley of Mexico, together with careful and extensive excavation of the ruined cities, the time will come when we can avail ourselves of something definite as regards the period of the beginnings and of the various epochs in the rise and fall of the Maya culture.

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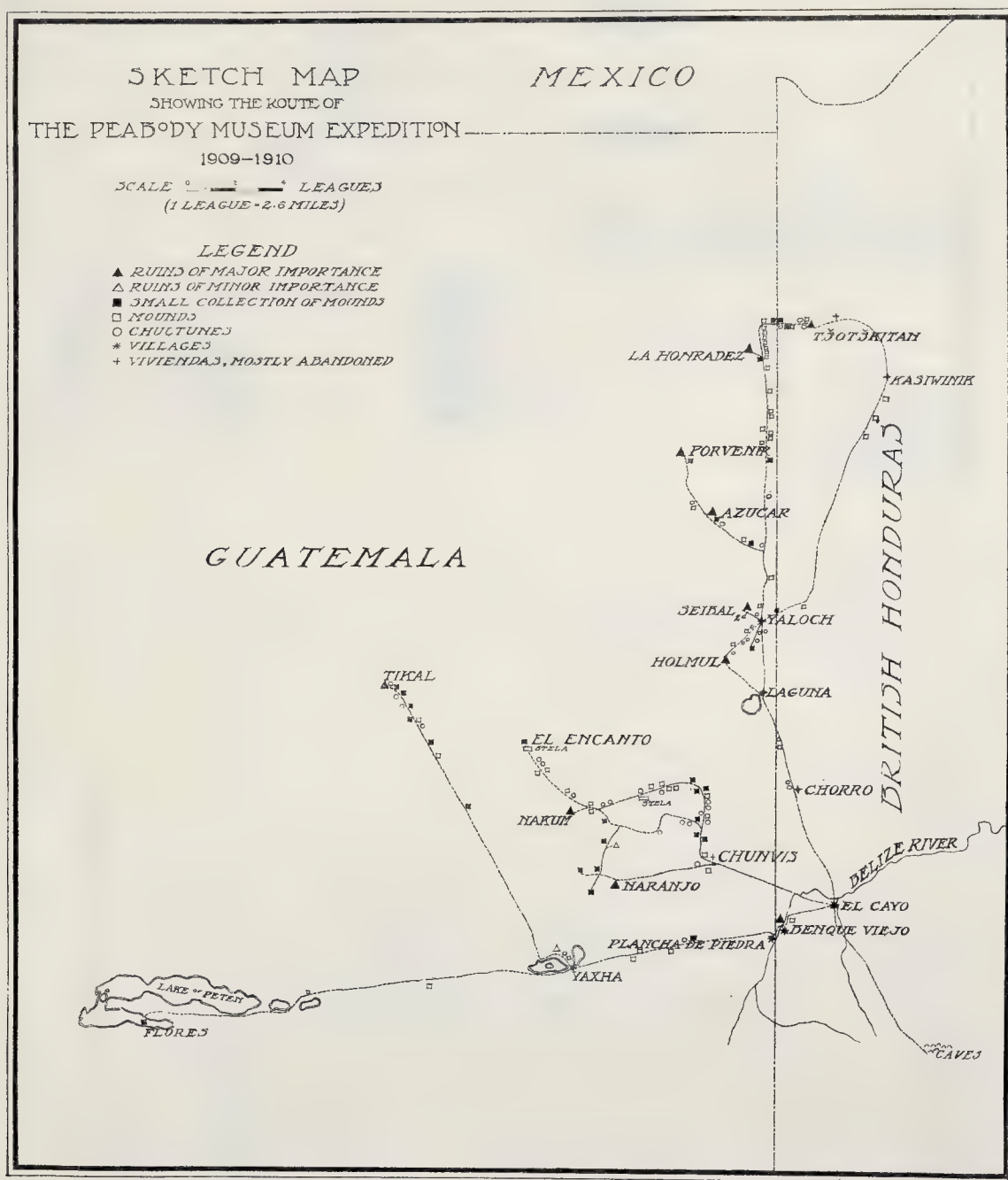
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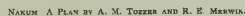




NAKUM: SKETCH MAP SHOWING ROUTE OF THE PEABODY MUSEUM EXPEDITION OF 1909 - 1910





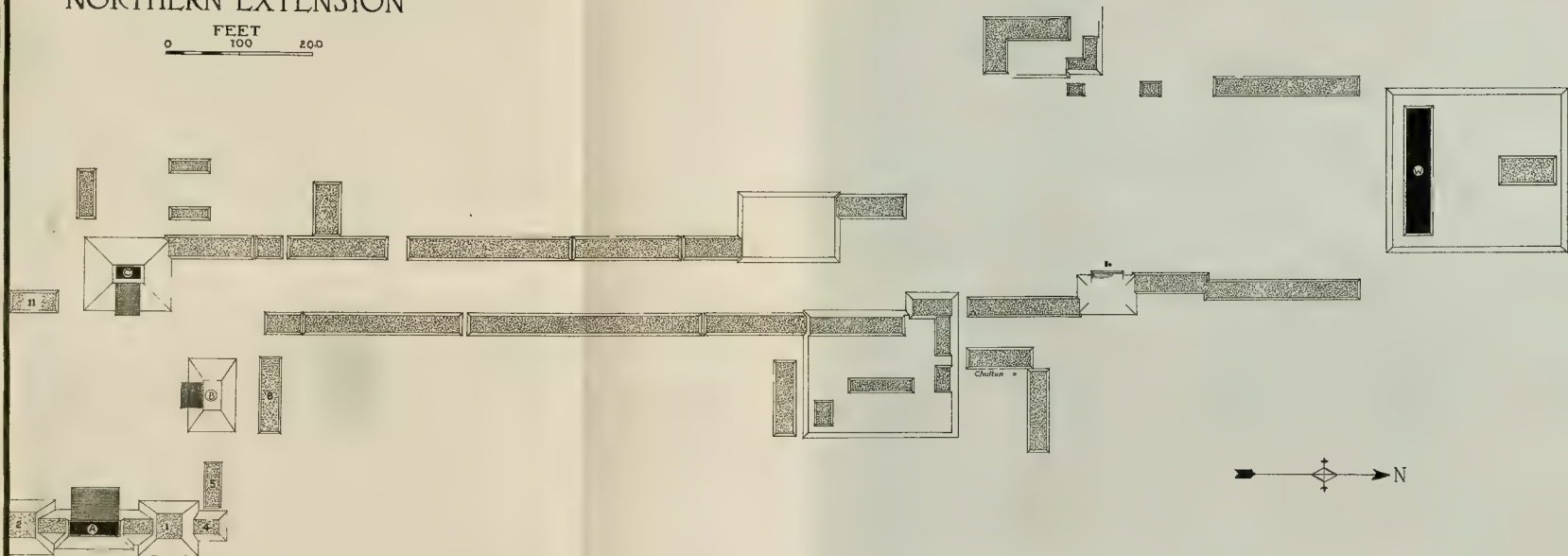




# NAKUM

## SKETCH MAP OF NORTHERN EXTENSION

FEET  
0 100 200

NAKUM: SKETCH MAP OF THE NORTHERN EXTENSION.





# NAKUM

## SECTIONS THROUGH RUINS

0 FEET 50 100

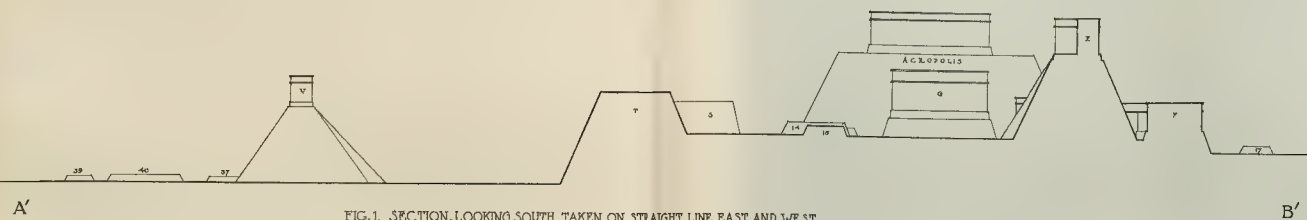


FIG. 1. SECTION, LOOKING SOUTH, TAKEN ON STRAIGHT LINE EAST AND WEST

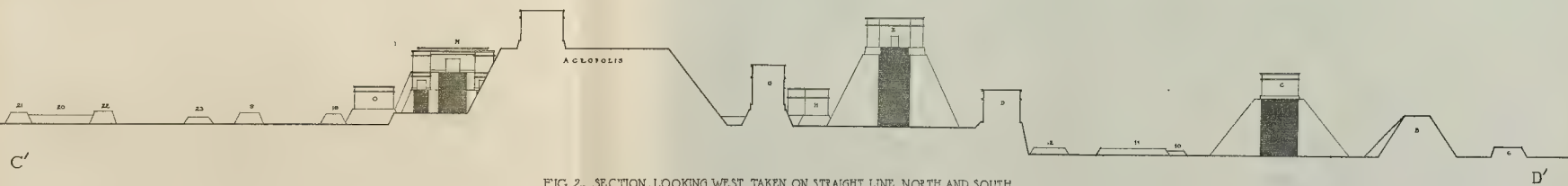


FIG. 2. SECTION, LOOKING WEST, TAKEN ON STRAIGHT LINE NORTH AND SOUTH

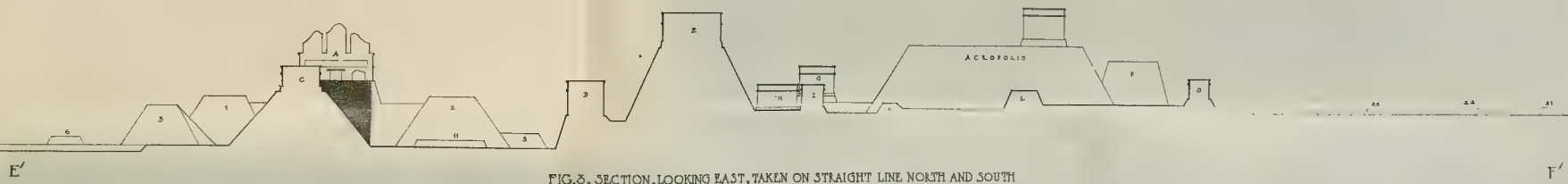
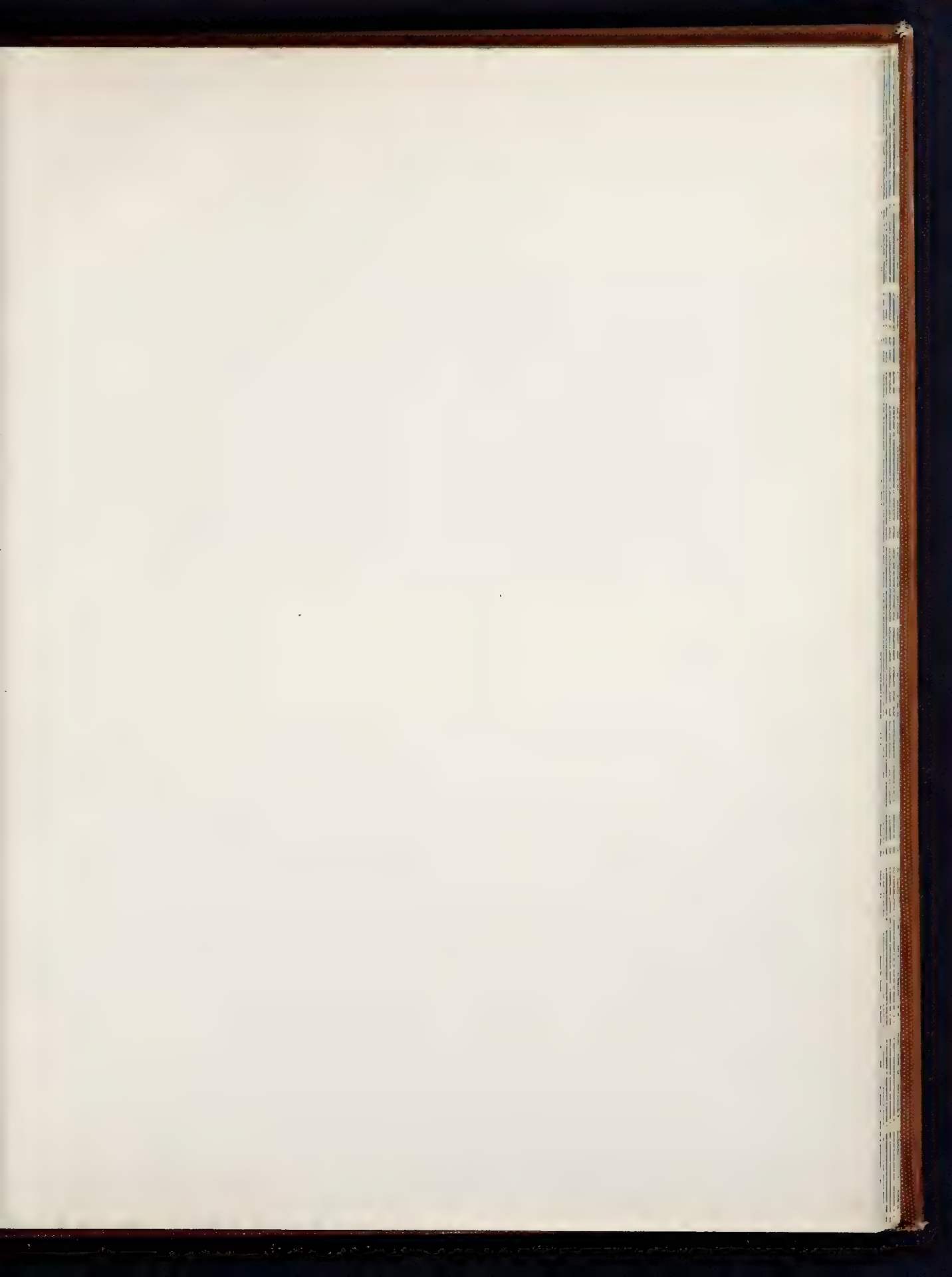
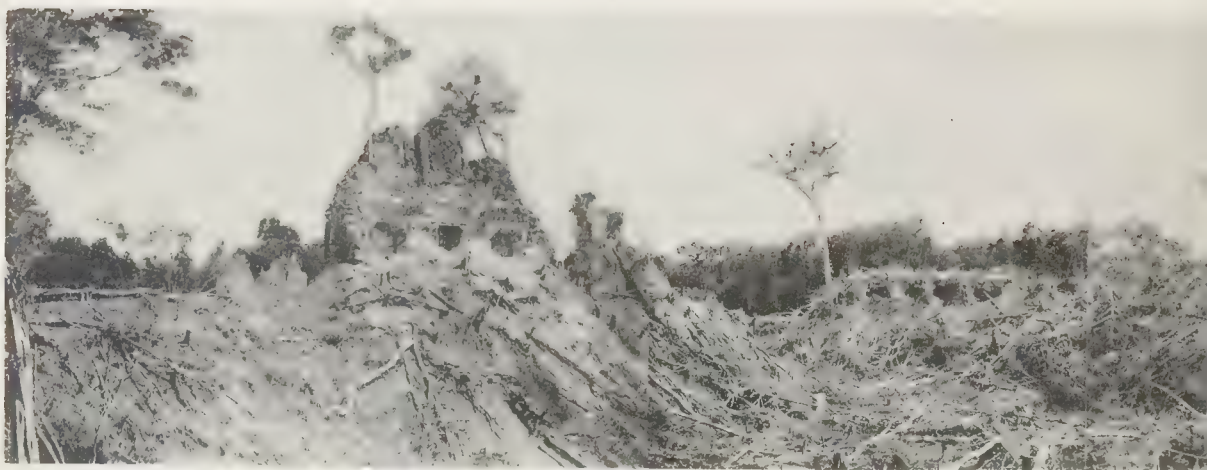


FIG. 3. SECTION, LOOKING EAST, TAKEN ON STRAIGHT LINE NORTH AND SOUTH









1. NAKIM LOOKING SOUTH



2. NAKIM LOOKING WEST AND NORTH

ACROPOLIS

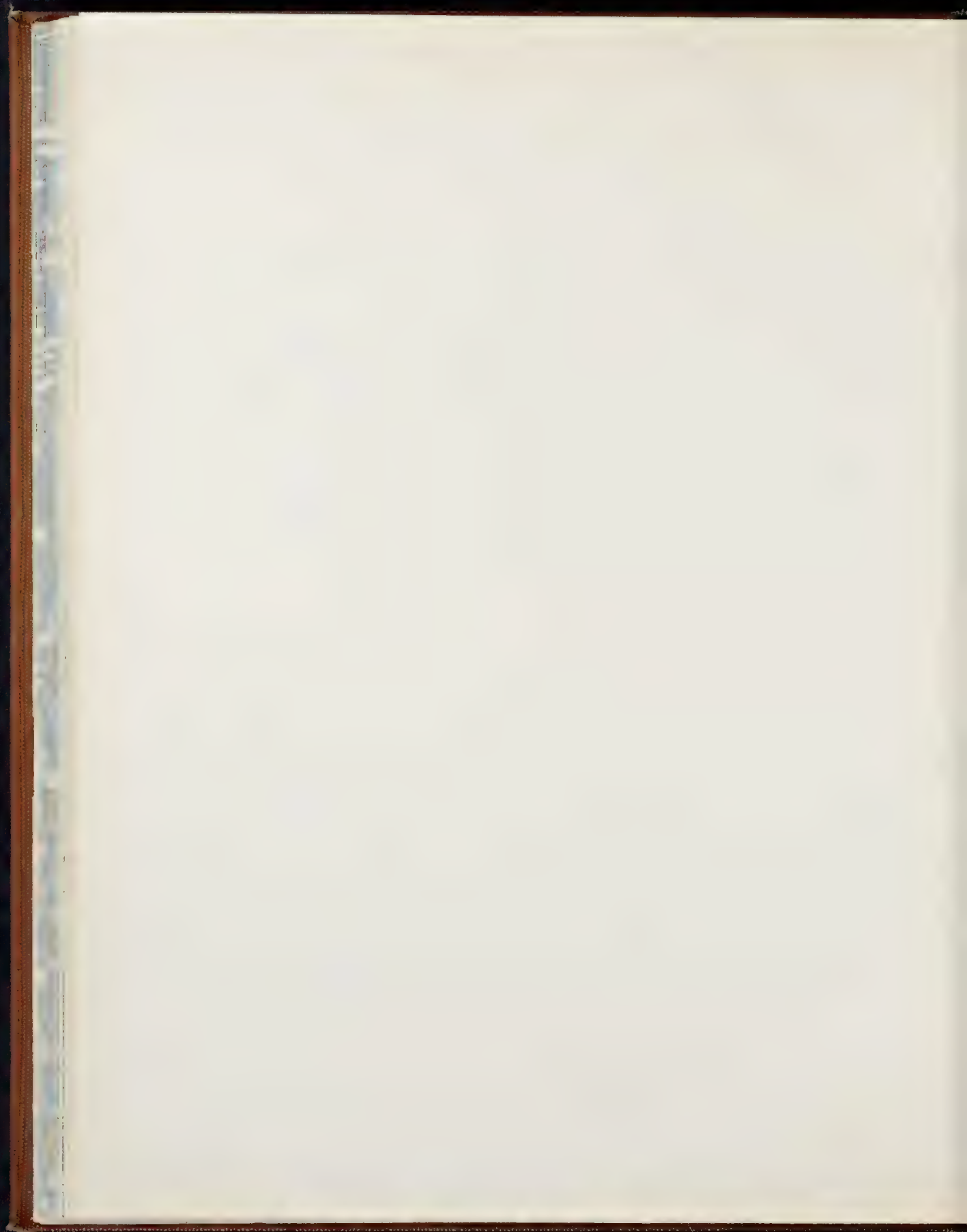


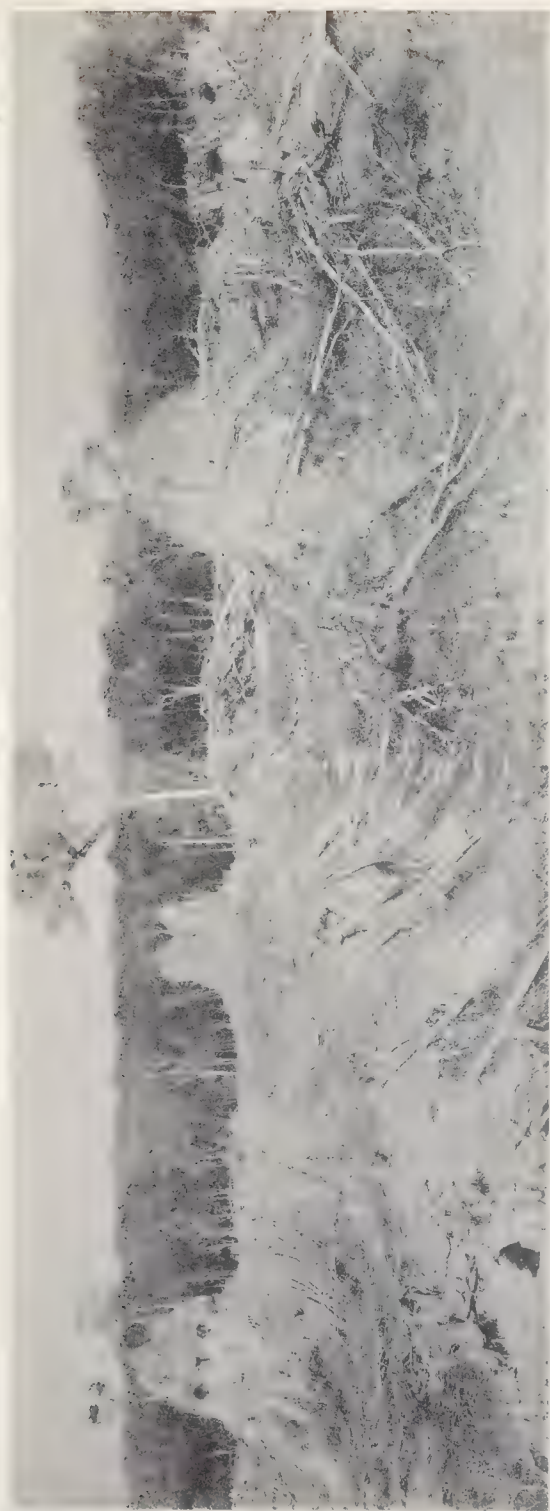
FROM MOUND B.



WEST FROM TEMPLE U.







MISSOURI BOTANICAL GARDEN







NACIM, TOLUCA, MEXICO, Vol. V, Plate 37, No. 1



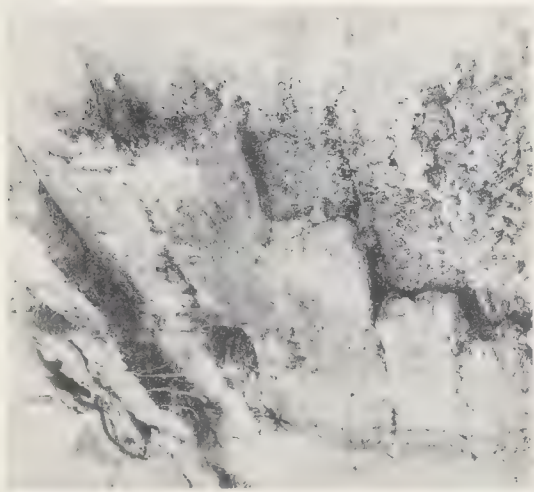


FIGURE 6. PEABODY MUSEUM, WASH.

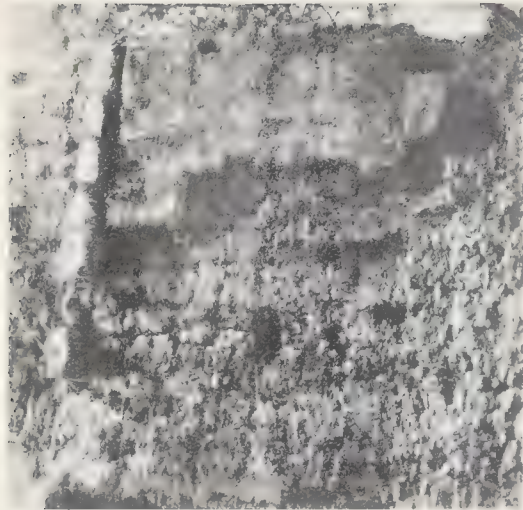


FIGURE 7. PEABODY MUSEUM, WASH.



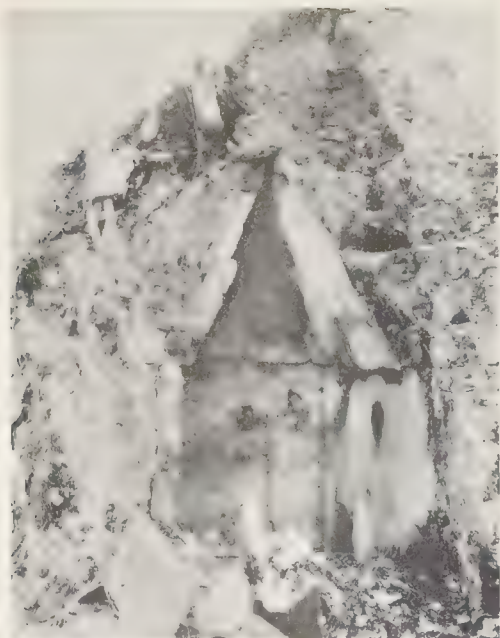
FIGURE 8. PEABODY MUSEUM, WASH.



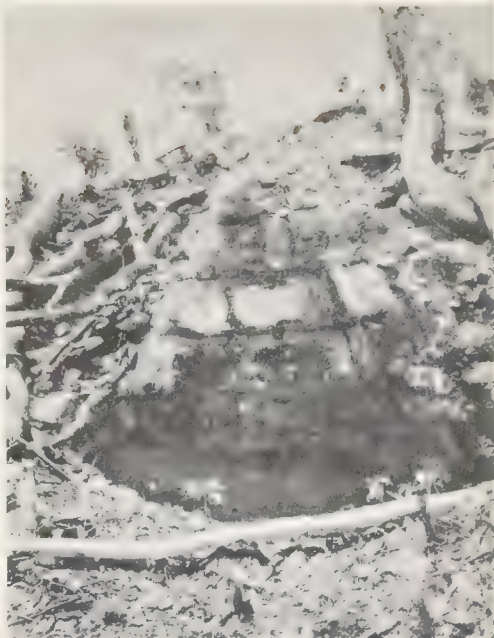
FIGURE 9. PEABODY MUSEUM, WASH.







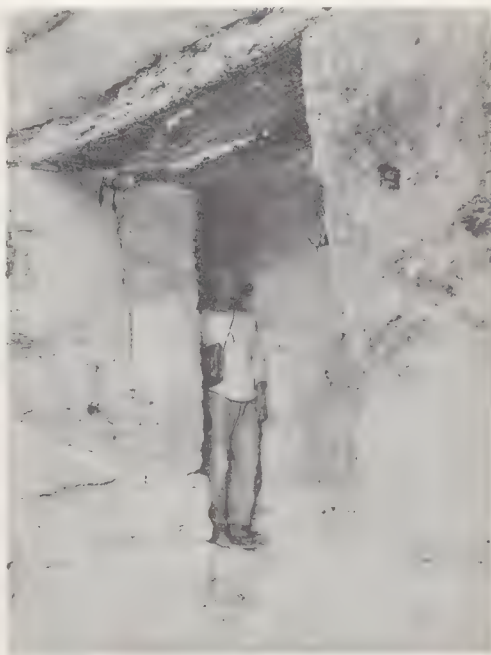
TEMPLE A: NORTH END OF CHURCH



TEMPLE A: WESTERN RINCH, NORTH END OF  
MIDDLE ROOM



3. TEMPLE N: ENTRANCE TO SOUTHWESTERN ROOM.



4. TEMPLE A: CENTRAL DOORWAY, SHOWING WIDTH OF INNER ROOM.



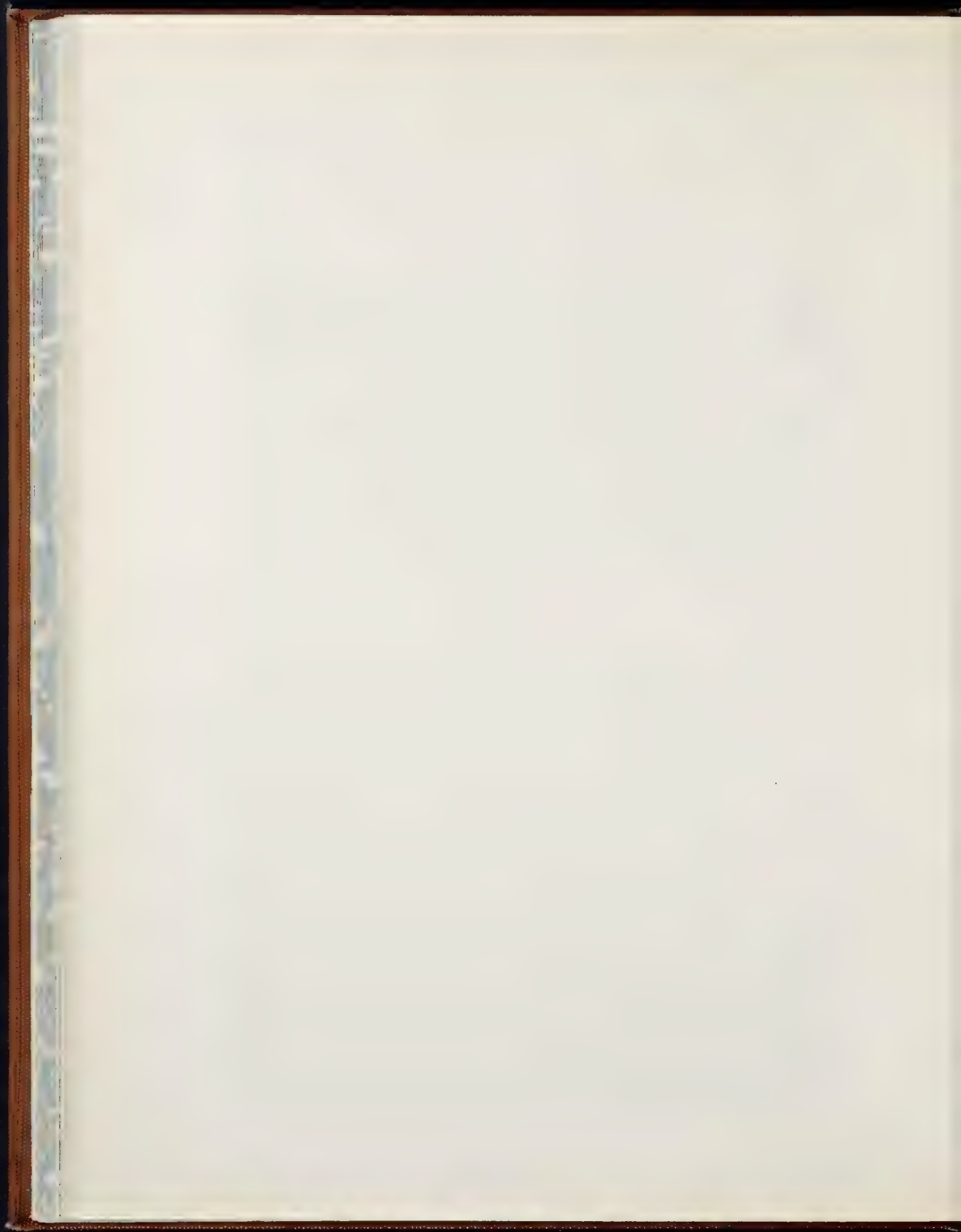




NAKUM: TEMPLE A; FRONT OR WESTERN FAÇADE.



2. NAKUM: TEMPLE A; BACK OR EASTERN FAÇADE.







1. NAKUM: ONE OF THE ALTARS AND PORTIONS OF TWO OF THE STELAE IN FRONT OF STRUCTURE B.



2. NAKUM: TEMPLE C; FRONT OR EASTERN FAÇADE AND SILLIA C.







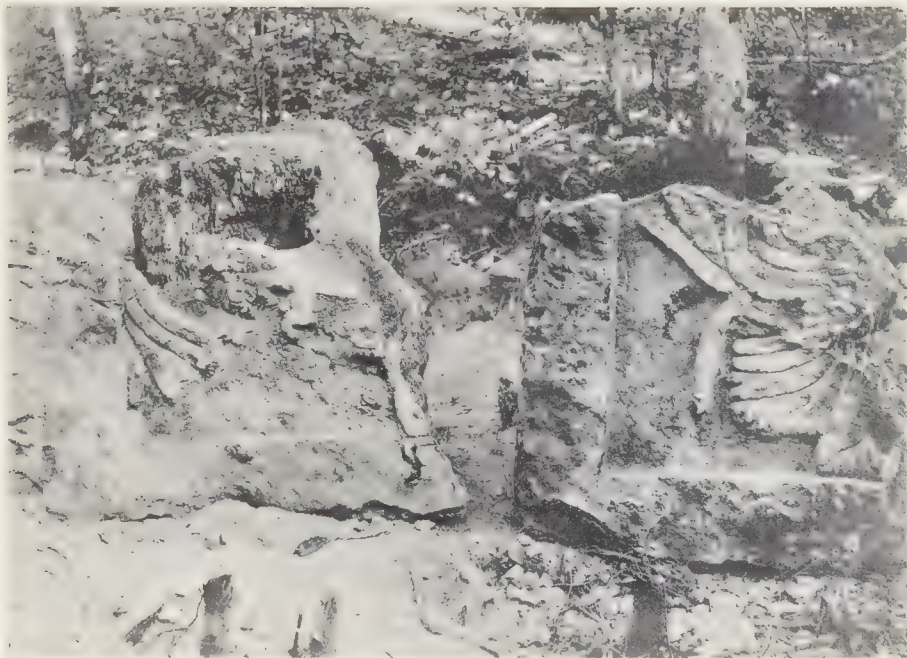
1. NAKAM, FRAGMENT OF STONE



2. NAKAM, FRAGMENT OF STONE



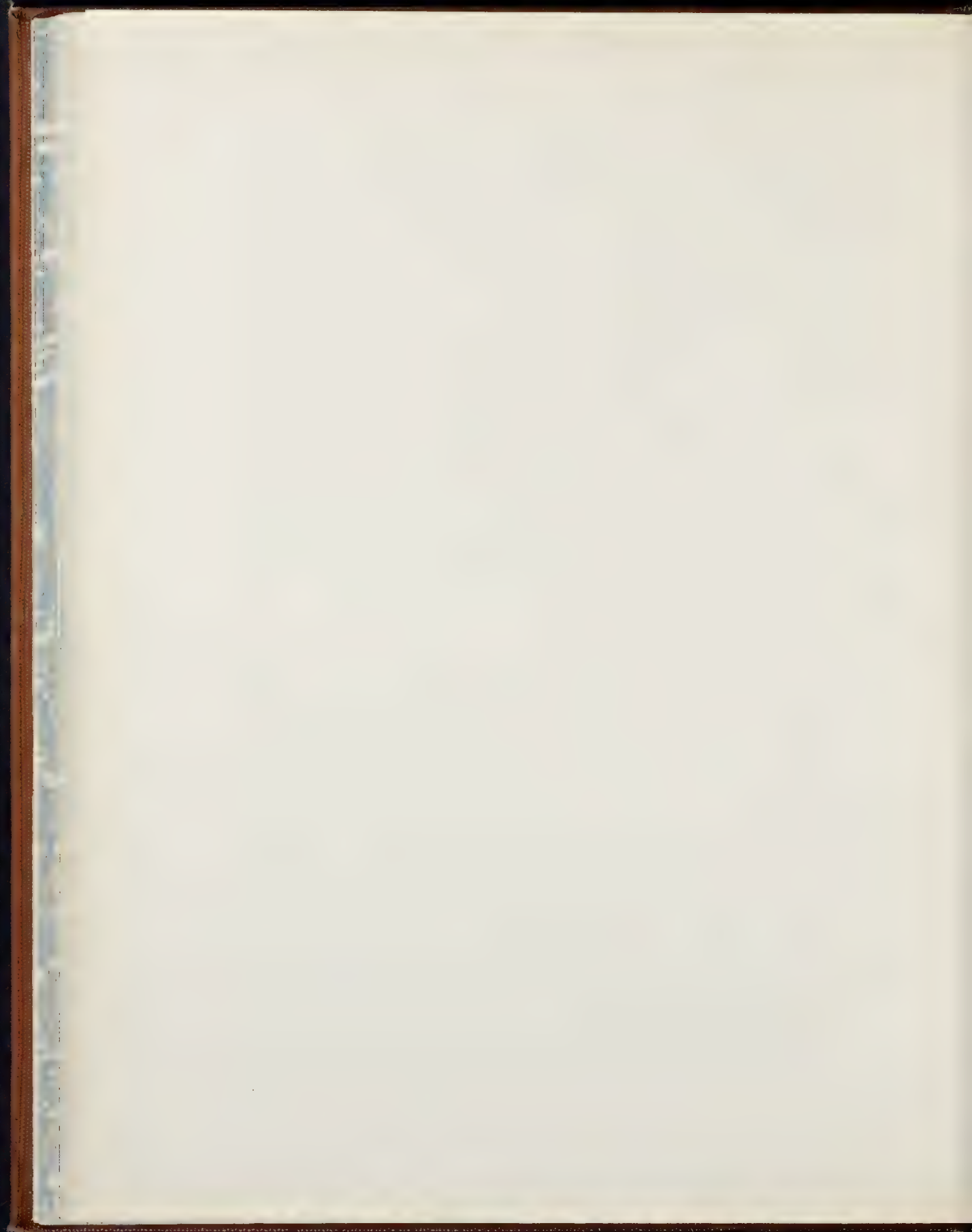




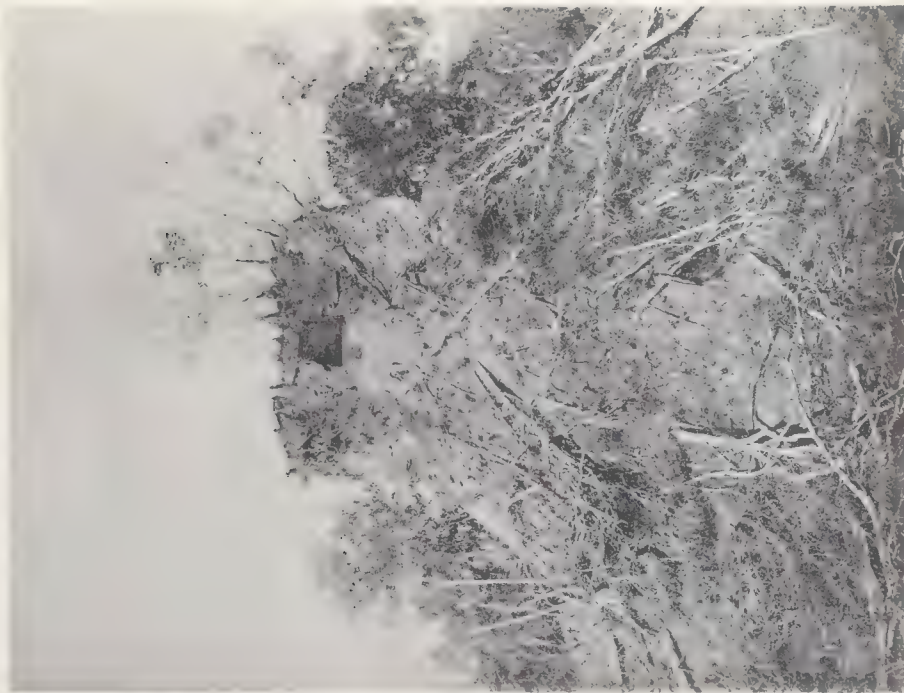
NAKVI. FRAGMENTS OF STUPA D2



NAKVI. STUPA D1 FROM THE SOUTH AND SOUTHERN WALL OF STRUCTURE I







NEW TABLET. FRONT OF TABLET.



NEW TABLET. FRONT OF TABLET.



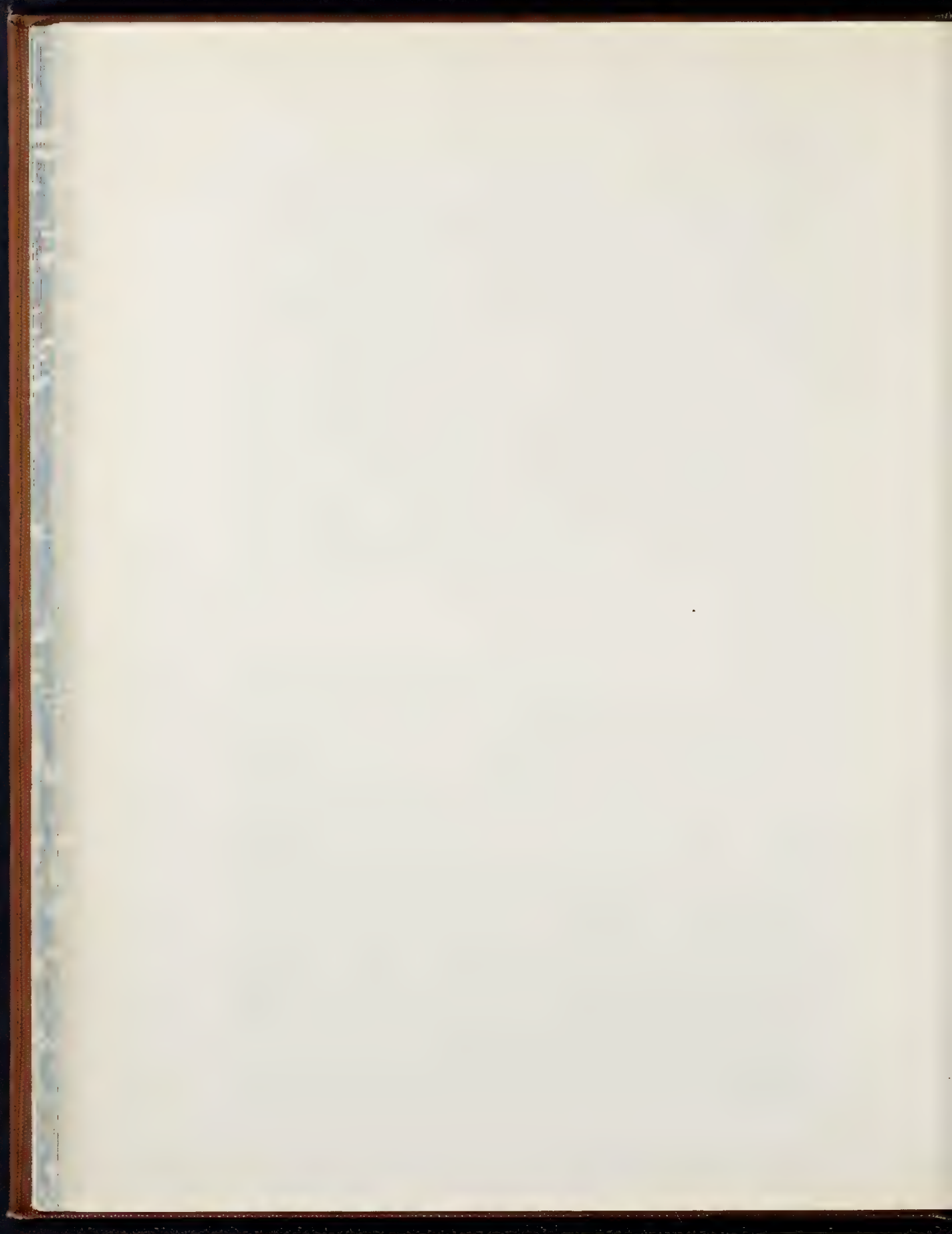




1. NARUM: TEMPLE N FROM THE ACROPOLIS, SHOWING THE MAIN BUILDING AND THE TWO ANNEXES.



2. NARUM: TEMPLE N FROM THE SOUTH, WITH CORNER OF THE ACROPOLIS AND SOUTHERN WALL OF STRUCTURE O.



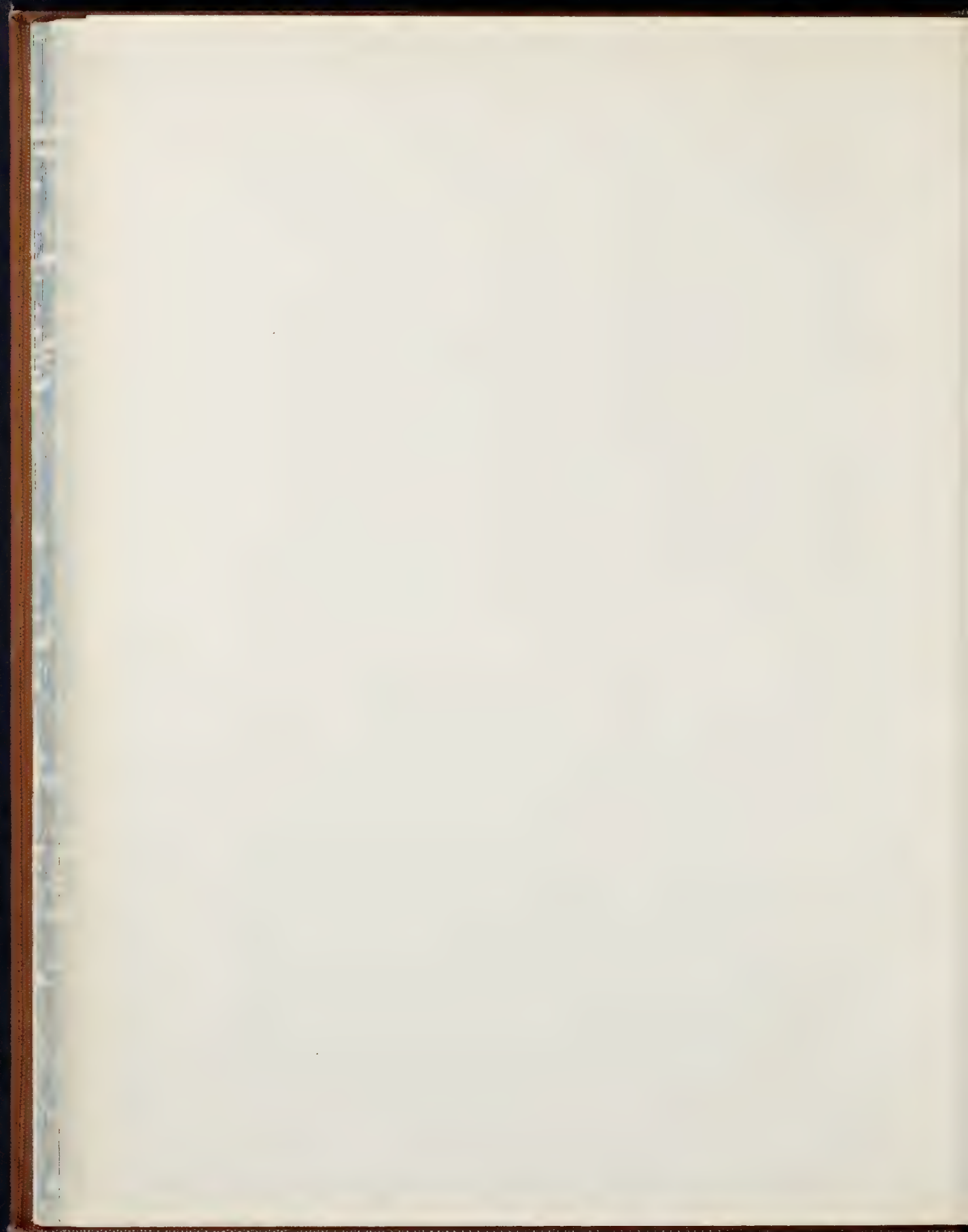




1. NAKUM: TEMPLE N: SOUTHWESTERN CORNER, SHOWING MAIN BUILDING AND SOUTHERN ANNEX



2. NAKUM: TEMPLE N: NORTHERN FAÇADE OF MAIN BUILDING





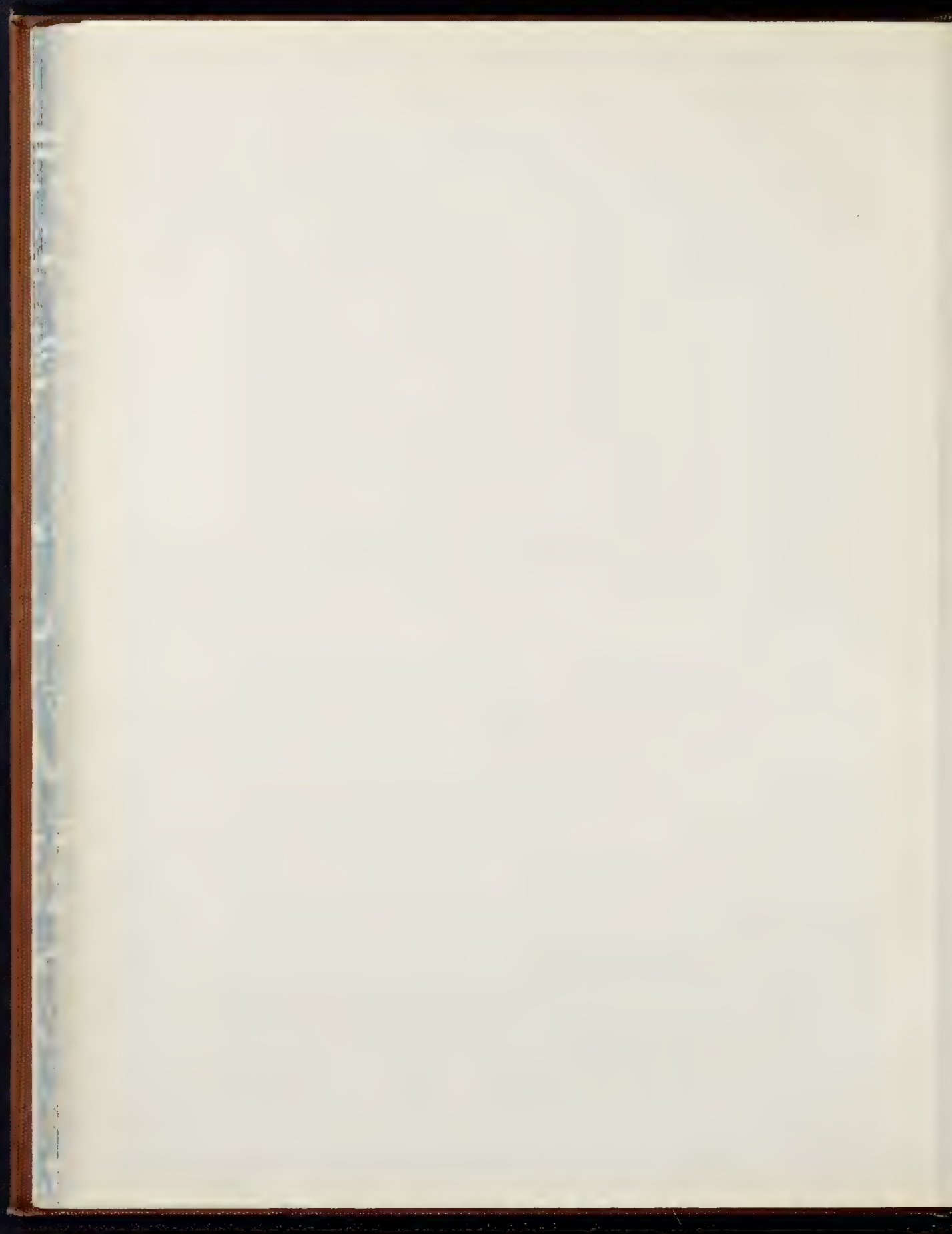


NAKAL VARGOIS FROM THE NORTH, S. E. G.



NAKAL VARGOIS FROM THE EAST, S. W. G. P. H. K. ROOMS ON THE EAST, S. E. MOUNT.



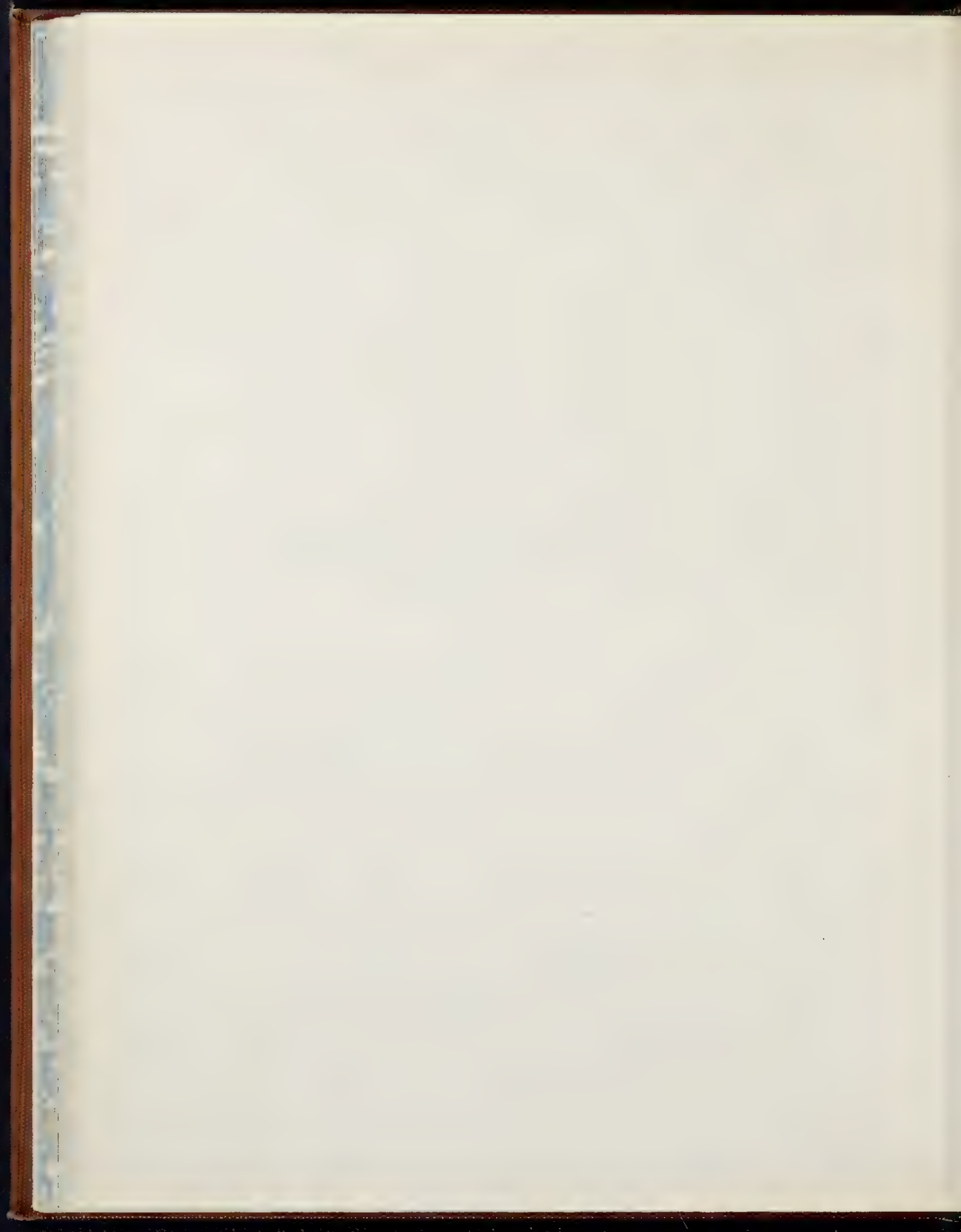




1. NAKUM: STRUCTURE P, AND SOUTHEASTERN CORNER OF TERRACE.



2. NAKUM: STRUCTURE R: NORTHERN ROOM IN WESTERN RANGE.







1. NAKUM TEMPLE I, FROM THE NORTH-EAST, AND MOUND 35.



2. NAKUM TEMPLE V, FRONT OR WESTERN FAÇADE AND MOUNDS 45 AND 46.







ARKANSAS TRAIL, 1. BELL'S LANDING, TEXAS



ARKANSAS TRAIL, 2. BELL'S LANDING, TEXAS



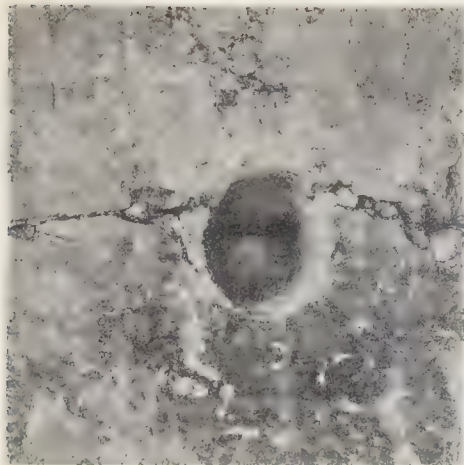




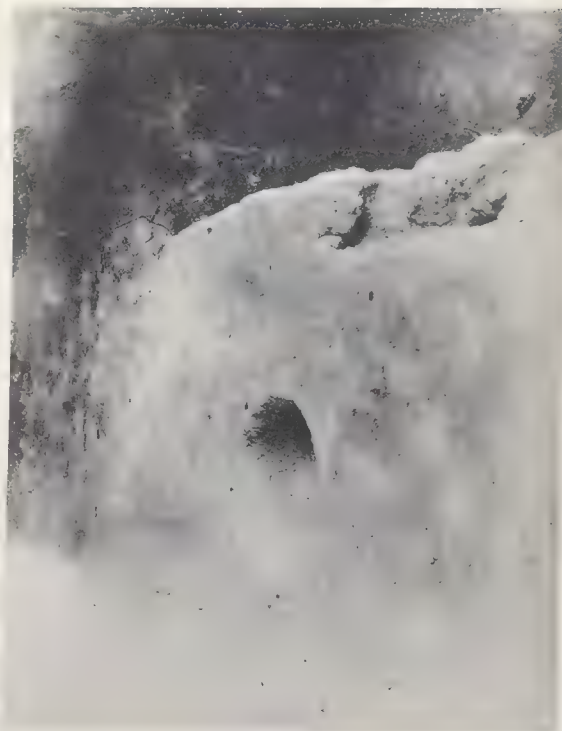
1. STRUCTURE G, PORTION OF MASK ON SOUTH-FACE WALL



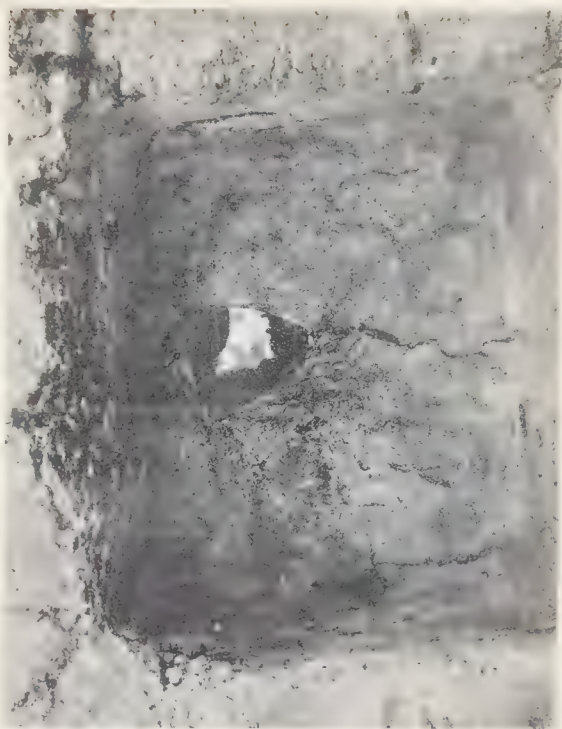
2. STRUCTURE L, MASK ON EAST-FACE END OF BUILDING



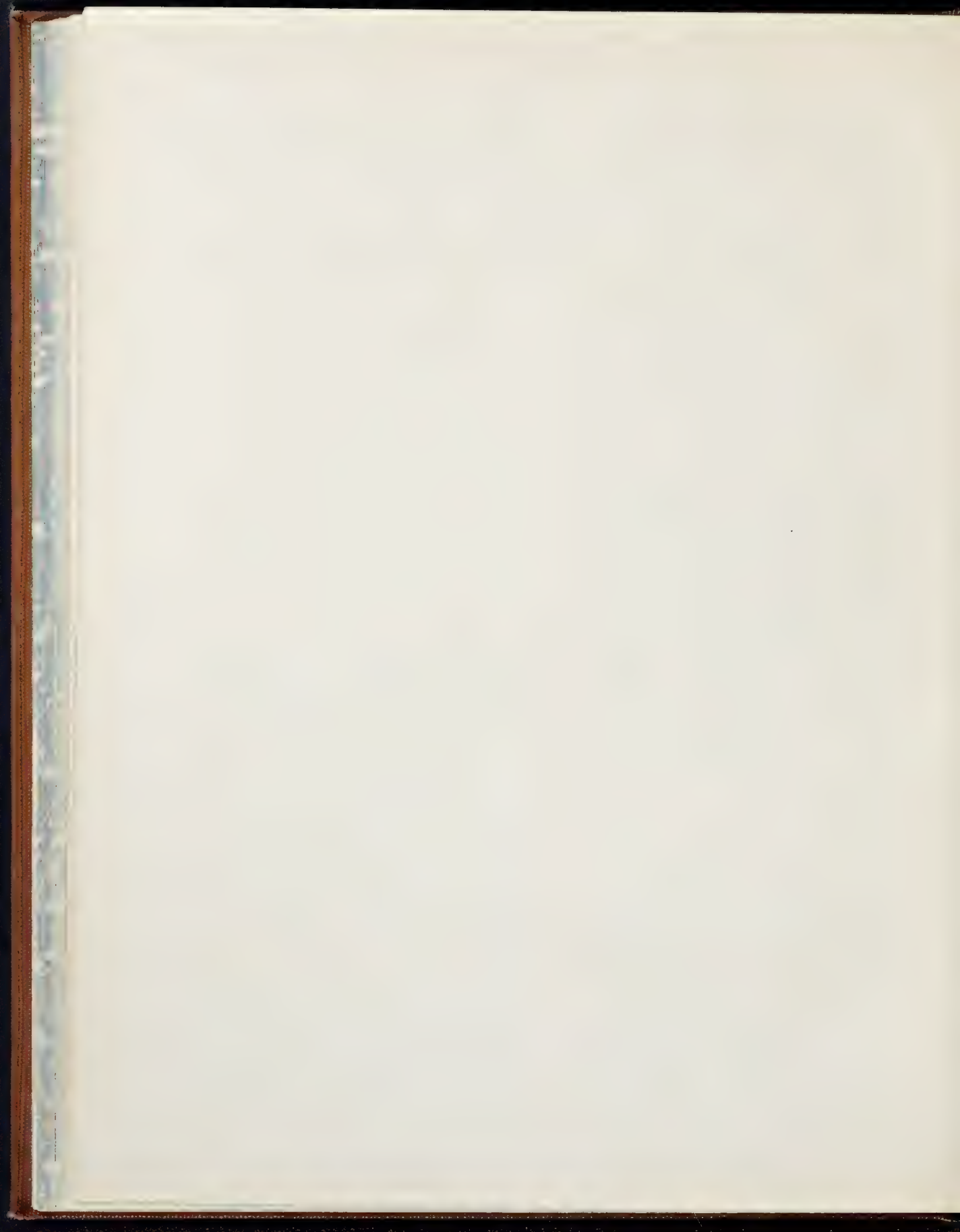
3. FIGURE N, SOUTHERN ANNA, UPPER CHAMBER, THRUSS



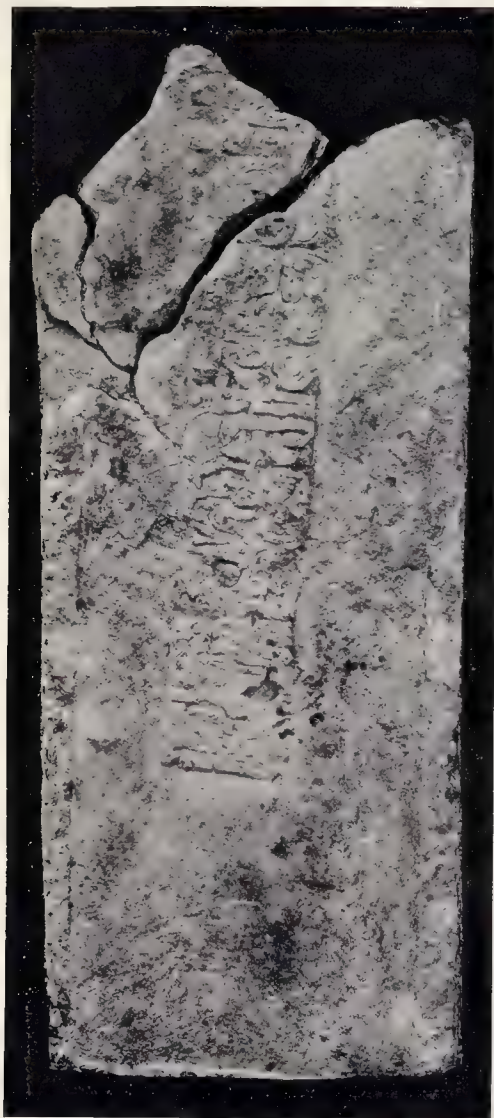
4. FIGURE P, BUILDING IN CHAMBER, SHOWING DRESSING



5. FIGURE N, SOUTHERN ANNA, UPPER CHAMBER, CLOSING OF DRESSING







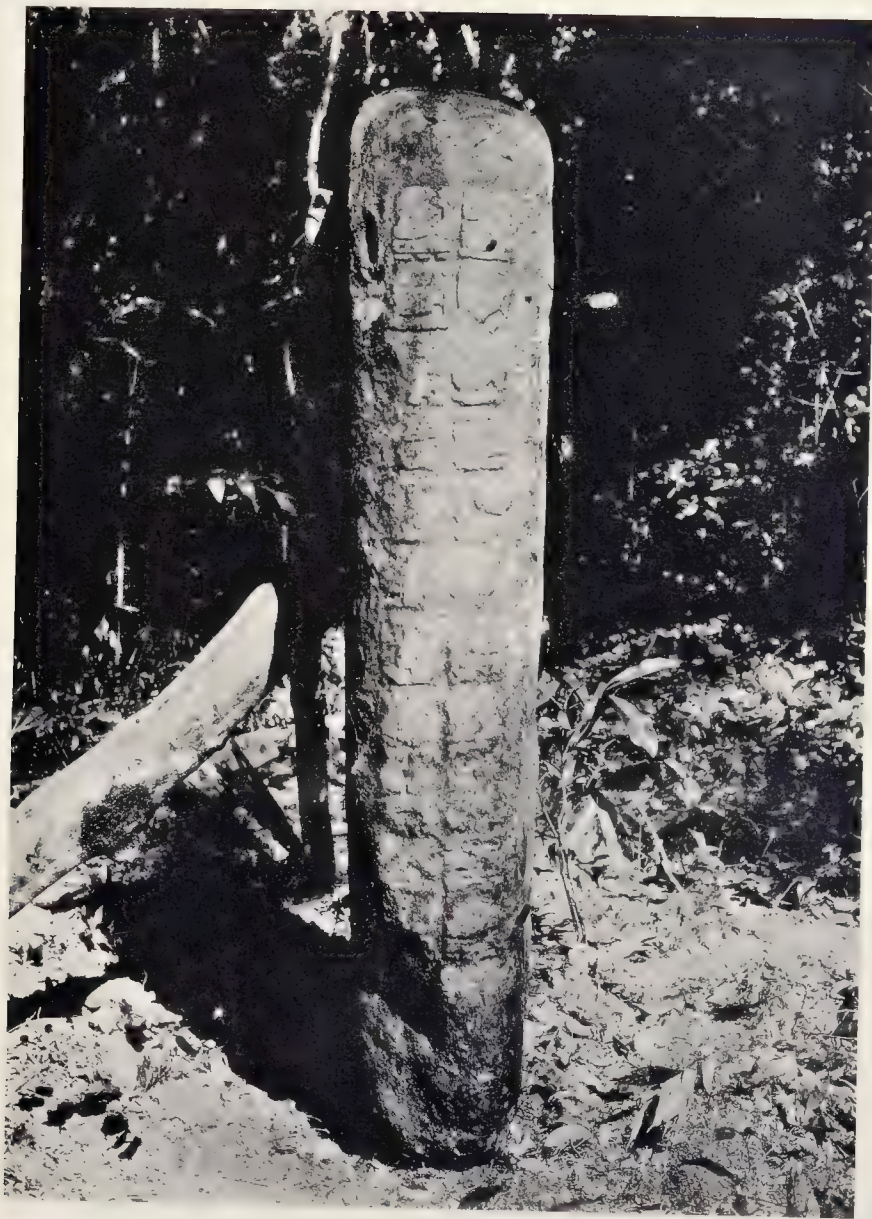
1. NAKM. S. I. A. C.



2. NAKM. S. I. A. C.







EL ENCANTO: STELA, NORTHERN SIDE.



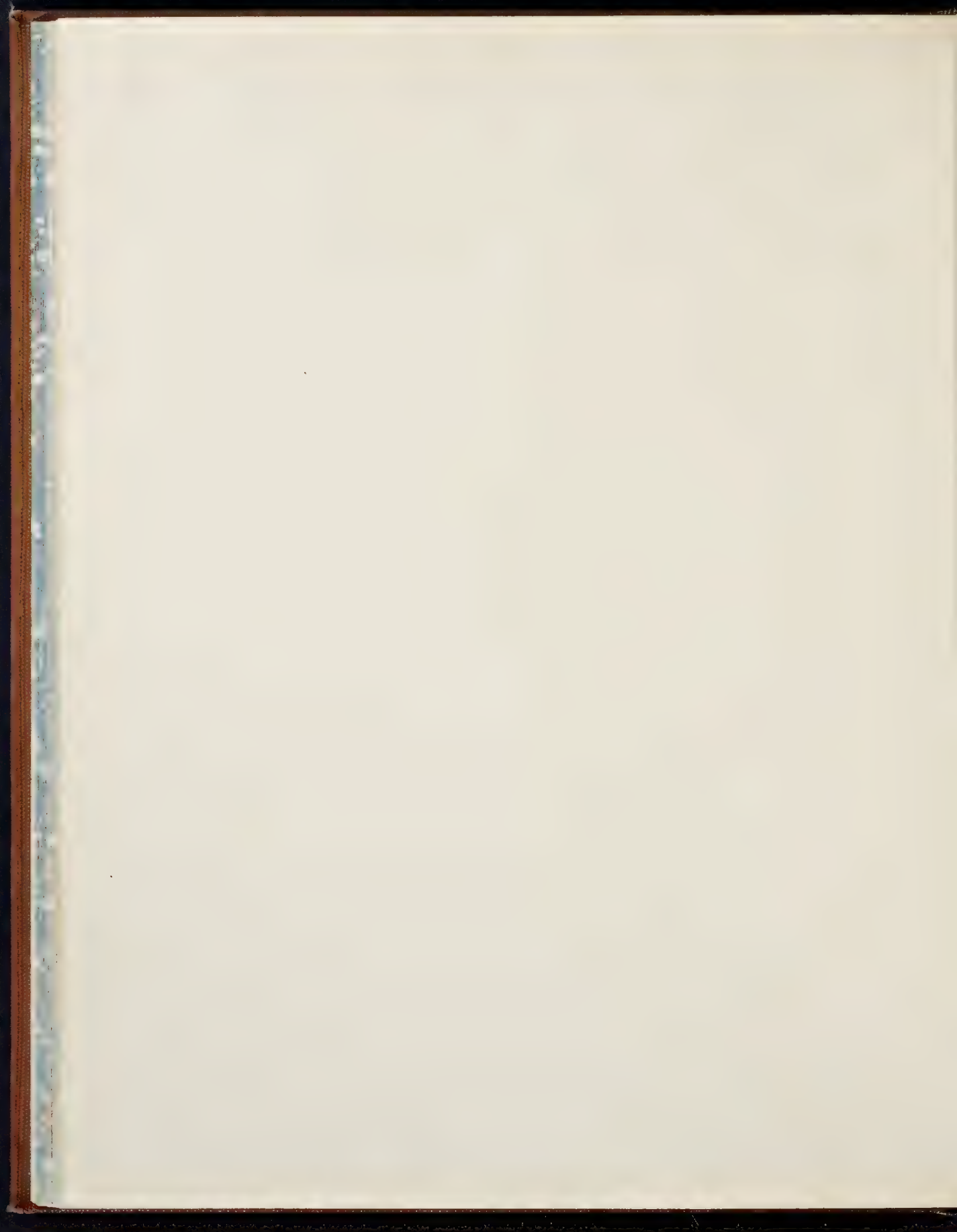












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